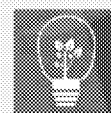


Special Report

# Protection of wild pollinators in the EU — Commission initiatives have not borne fruit



EUROPEAN  
COURT  
OF AUDITORS

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## Executive summary

I Pollinators transfer pollen from male to female structures of flowers, enabling fertilisation and reproduction of plants. They increase the quantity and quality of food, and ultimately secure our food supply. Wild pollinators in the EU are declining in abundance and diversity under the increasing threat from human activity, in particular conversion to intensive agriculture and the use of pesticides and fertilisers.

II The Commission has put in place measures affecting wild pollinators in the areas of the environment, pesticides, agriculture, cohesion, and research and innovation. In June 2018, the Commission published the Pollinators Initiative, which includes a list of actions to tackle the main threats to wild pollinators.

III We chose to carry out an audit on the Commission's approach to protect wild pollinators to contribute to legislative updates in the areas of biodiversity, agriculture and pesticides planned in the period 2021-2022.

IV Our audit examined whether the Commission has taken a consistent approach to the protection of wild pollinators in the EU. We assessed the extent to which the Commission's framework for wild pollinators helped to stop the decline in their number and diversity, and whether the Commission used biodiversity conservation measures, and measures available in the common agricultural policy and the pesticide legislation to address the need to protect wild pollinators.

V We found that overall the Commission had not taken a consistent approach to the protection of wild pollinators in the EU. We identified gaps in key EU policies addressing the main threats to wild pollinators, and considered that the Pollinators Initiative does not have the tools and mechanisms to address those gaps.

VI Based on our findings, we make recommendations to help the Commission:

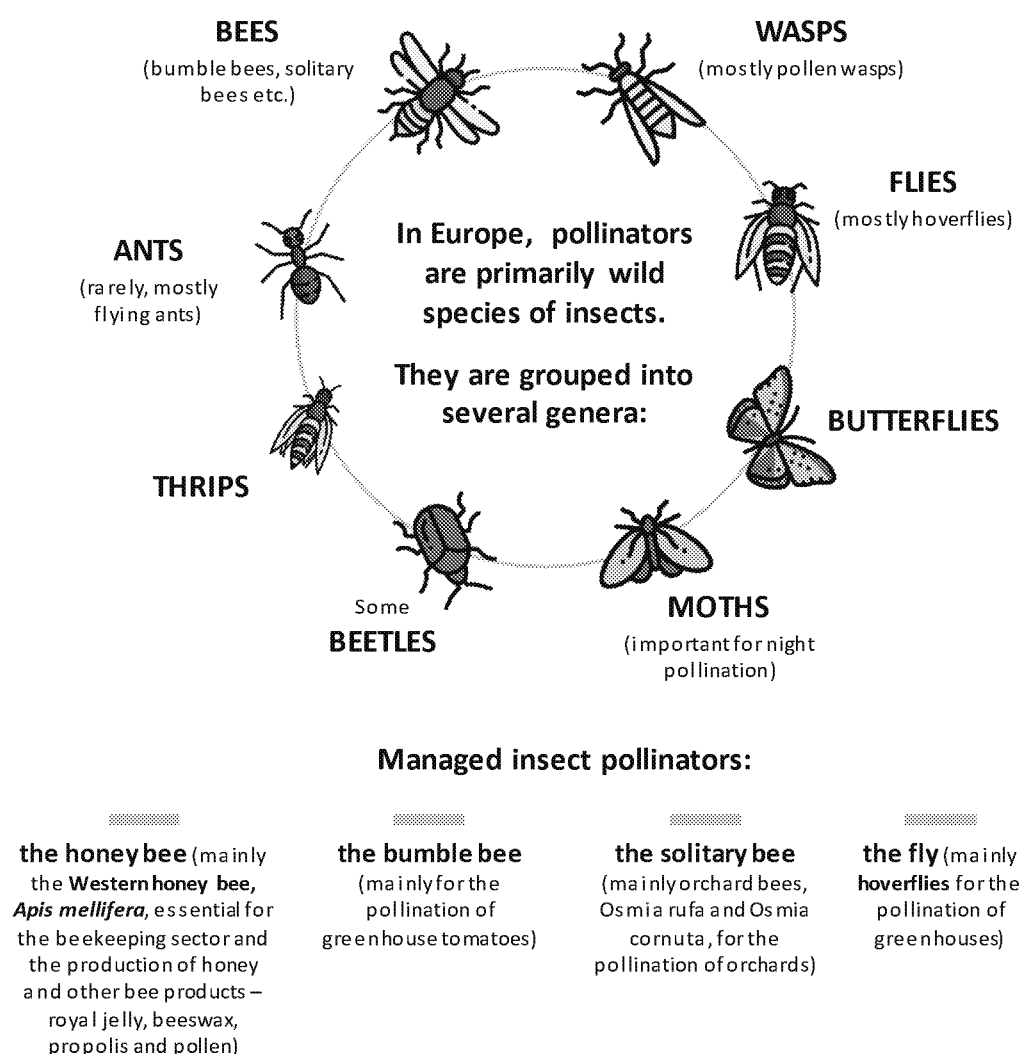
- Assess the need for specific measures for wild pollinators in the follow-up actions and measures for the EU biodiversity strategy to 2030;
- Better integrate actions to protect wild pollinators in EU policy instruments addressing biodiversity conservation and agriculture;
- Improve the protection of wild pollinators in the pesticides risk assessment process.

# Introduction

## Pollinators are declining in the EU

**01** Pollinators are animals that transfer pollen from male to female structures of flowers, enabling fertilisation and reproduction of plants. In Europe, pollinators are primarily insects, such as bees (including bumble bees, honey bees and solitary species of bees), wasps, hoverflies, butterflies, moths, beetles and other fly species. Most insect pollinators are wild species, but some are reared for their economic value (see Figure 1).

Figure 1 – Pollinators in the EU



Source: ECA.

**02** Pollinators are essential for nature and for mankind. In the EU, nearly four-fifths of temperate wildflowers and crops depend to various extents on insect pollination. An EU financed project estimated the yearly contribution of insect pollinators to European agriculture at around €15 billion<sup>1</sup>. Pollinators increase the quantity and quality of food, and ultimately secure our food supply<sup>2</sup>.

**03** In recent decades, wild pollinators in the EU have declined in abundance and diversity. In 2016, the global assessment of the status of pollinators<sup>3</sup> concluded that wild pollinators are decreasing under the increasing threat from human activity, including climate change. A 2019 worldwide assessment report on insects<sup>4</sup> confirmed a negative trend in the number of insects in general, with over 40 % of insect species threatened with extinction. The most affected insect species are butterflies, moths, bees and beetles.

**04** In 2020, the World Economic Forum<sup>5</sup> placed loss of biodiversity among the top five long-term global risks. It saw a decline of pollinators leading to a shift in crop cultivation from nutrient-rich food crops (fruits, vegetables and nuts – all of which require pollinators) to energy-dense, nutrient-poor staple crops (for example rice, corn, wheat, soybean and potatoes). A loss of habitat from conversion to intensive agriculture, and the use of pesticides and fertilisers are among the main causes of decline, set out in *Figure 2*.

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<sup>1</sup> Potts S. et al, "Status and trends of European pollinators. Key findings of the STEP project", 14 January 2015.

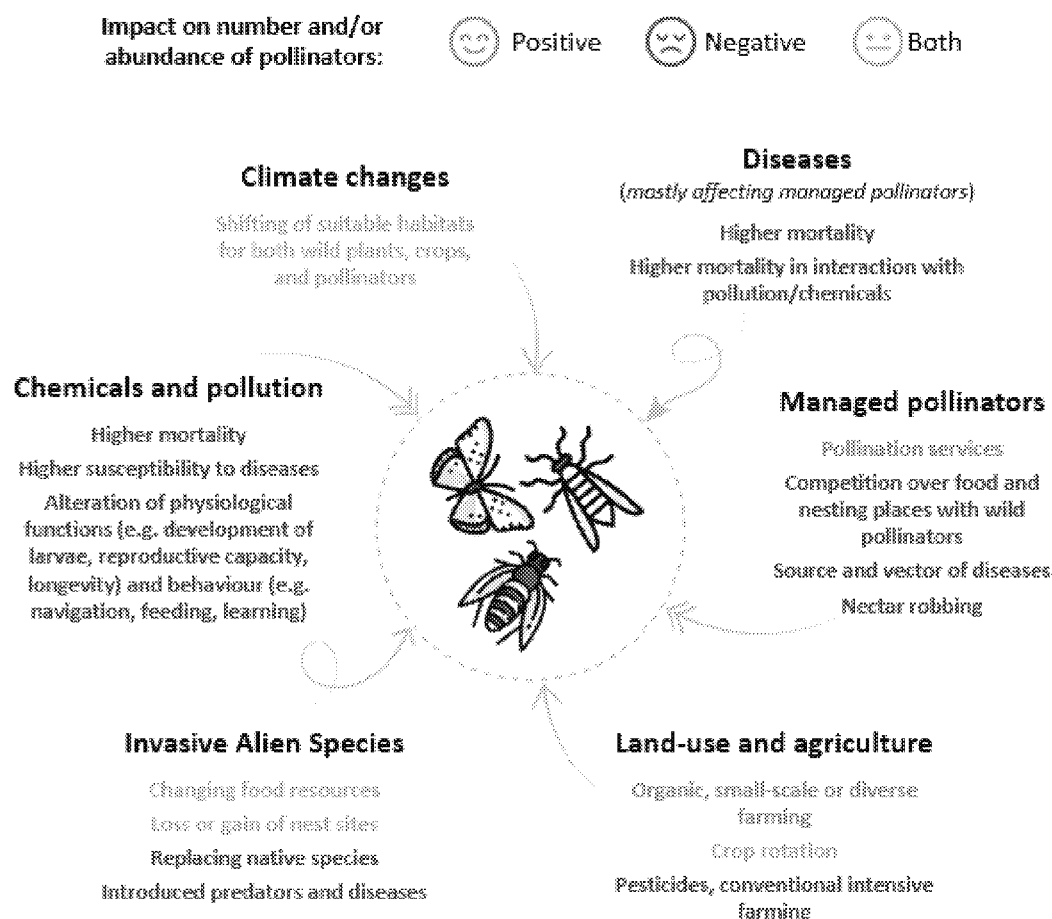
<sup>2</sup> FAO, "The power of pollinators: why more bees means better food", 24 August 2016.  
L. A. Garibaldi et al, "Mutually beneficial pollinator diversity and crop yield outcomes in small and large farms", Science Magazine, 2016.

<sup>3</sup> IPBES, "The assessment report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services on pollinators, pollination and food production", 2016.

<sup>4</sup> Sanchez-Bayo F., A.G. Wyckhuys K. "Worldwide decline of the entomofauna: A review of its drivers", 31 January 2019.

<sup>5</sup> World Economic Forum, "The Global Risks Report 2020", 15<sup>th</sup> Edition, 15 January 2020.

Figure 2 – Impact of different pressures on pollinators



Source: ECA based on IPBES information.

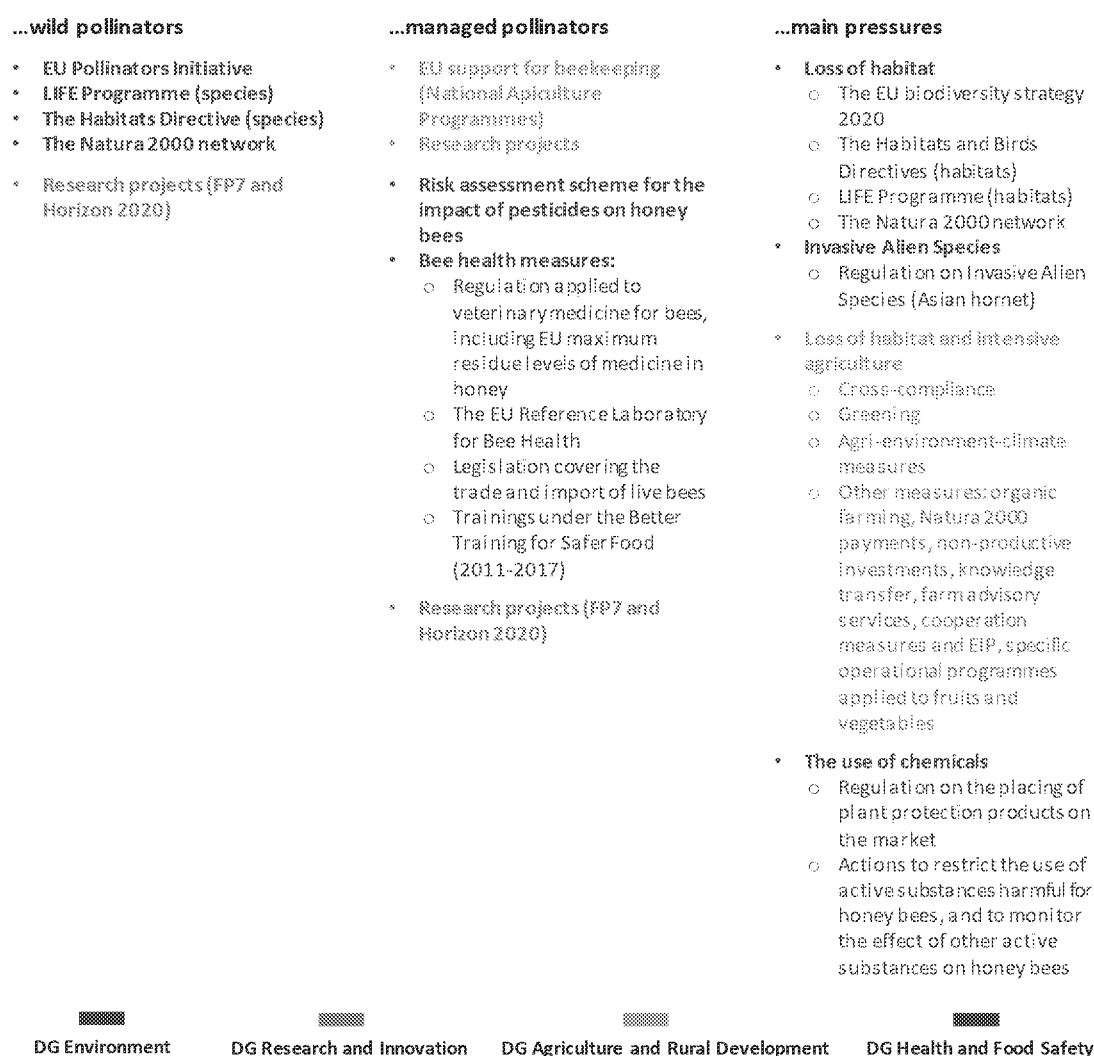
## EU initiatives to protect wild pollinators

**05** The EU biodiversity strategy to 2020<sup>6</sup> sets out the European framework for priority action on biodiversity, which includes wild pollinators. In addition, the Commission has put in place measures affecting wild pollinators under existing policies and legislation in the areas of the environment, pesticides, agriculture, cohesion, and research and innovation (see *Figure 3*). Most of these measures are indirect and focus on the protection or creation of habitats considered to be beneficial to pollinators, on providing food resources, or on the control of invasive alien species. Some direct measures refer strictly to the honey bee, as a managed pollinator.

<sup>6</sup> Communication from the European Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions “Our life insurance, our natural capital: an EU Biodiversity Strategy to 2020”, COM/2011/0244 final.

**Figure 3 – Key Commission responsibilities for legislation, policies and initiatives**

### ACTIONS TARGETING...



Source: ECA based on Commission information.

**06** In June 2018, the Commission published the “EU Pollinators Initiative”<sup>7</sup> (the Pollinators Initiative) in the form of a Commission communication, accompanied by a Staff Working Document. The Pollinators Initiative, which has no legal force, acknowledged the severe decline in the abundance and diversity of wild insect pollinators in the EU, and the need for EU action to address this problem. It also set

<sup>7</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM/2018/395 final, 1 June 2018.



out a list of actions for the period up to 2020 aimed at contributing to three long-term objectives:

- improving scientific knowledge about pollinator decline,
- tackling the main threats to pollinators, and
- improving collaboration between the parties concerned.

The actions proposed to tackle the main threats to wild pollinators focus on the conservation of habitats, including agricultural and urban habitats, and the reduction of the impact of pesticides and of invasive alien species.

**07** At the end of 2019, the Commission presented the European Green Deal<sup>8</sup>, a package of measures to support Europe’s transition to sustainable development and carbon neutrality by 2050. This seeks to preserve the EU’s natural capital.

**08** Following increasing public awareness of the decline of insect pollinators, citizens launched in 2019 a European initiative on the protection of bees<sup>9</sup>. Specifically, this initiative asked the Commission to phase out the use of pesticides in EU agriculture, and to support farmers to transition to sustainable farming practices. According to a roadmap published in January 2020<sup>10</sup>, leading scientists see reducing pesticide use and diversifying landscapes as tools to conserve and restore insect populations. They stressed the urgency of the situation, stating that there is enough information on some of the main causes of insect decline to formulate solutions immediately.

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<sup>8</sup> Commission Communication to the European Parliament, the European Council, The Council, The European Economic and Social Committee and the Committee of the Regions “The European Green Deal”, COM/2019/640 final.

<sup>9</sup> European Citizens’ Initiative “Save bees and farmers! Towards a bee-friendly agriculture for a healthy environment”, 30 September 2019.

<sup>10</sup> Harvey, J.A., Heinen, R., Armbrrecht, I. et al., “International scientists formulate a roadmap for insect conservation and recovery”, *Nature Ecology & Evolution*, 6 January 2020.

## Audit scope and approach

**09** We decided to carry out an audit on EU action addressing the decline of wild pollinators, in the light of the increasing importance of the problem, taking into account the Commission communication on wild pollinators (see paragraph **06**). We chose to carry out the audit now to contribute to the preparation and discussion of the list of actions planned for 2021 for the new EU biodiversity strategy to 2030, to the assessment framework for the Member States' Common Agricultural Policy (CAP) strategic plans for the 2022-2027 period, and to the review of the risk assessment methodology in relation to the impact of pesticides on bees.

**10** Our main audit question was: "Has the Commission taken a consistent approach to the protection of wild pollinators in the EU?" In order to answer this question, we examined whether the Commission has put in place a framework for wild pollinators that:

- (1) helped to stop the decline in their number and diversity;
- (2) enabled it to coordinate biodiversity conservation and agriculture policy measures to protect them;
- (3) included and applied safeguards for pollinators in the pesticides legislation.

**11** In the course of our audit we:

- collected audit evidence through a review of legislation, strategic and guidance documents, and relevant evaluations and reports;
- sent questionnaires to and conducted interviews with staff from four Commission directorates (Directorate-General for Environment, Directorate-General for Agriculture and Rural Development, Directorate-General for Health and Food Safety, and Directorate-General for Research and Innovation) and the European Food Safety Authority;
- surveyed five relevant European organisations representing producers and non-governmental organisations (BirdLife, the Committee of Professional Agricultural Organisations-General Confederation of Agricultural Cooperatives, the European Crop Protection Association, Pollinis and PanEurope), and consulted scientific experts to obtain a sound understanding of the risks, and confirm our findings.

**12** We focused our work on biodiversity conservation, agriculture and the use of pesticides (see paragraph 04). We excluded measures specifically addressing the impact of environmental pollution and climate change, and the control of invasive alien species. We also excluded measures directly addressing the health of honey bees and the beekeeping sector (see *Figure 3*), as they refer solely to managed pollinators. We focused on action and measures taken by the Commission, and did not visit Member States or verify national measures. This audit complements and was carried out in coordination with our work on farmland biodiversity, plant protection products, Natura 2000 and climate change<sup>11</sup>.

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<sup>11</sup> Biodiversity on farmland: CAP contribution has not halted the decline (special report 13/2020), Sustainable use of plant protection products: limited progress in measuring and reducing risks (special report 05/2020), More efforts needed to implement the Natura 2000 network to its full potential (special report 01/2017).

## Observations

The EU framework for wild pollinators had little effect on halting decline

**13** The EU framework involves the EU biodiversity strategy to 2020, a Commission communication that was endorsed by the Council and the Parliament, and the Pollinators Initiative, a Commission communication. We examined the way in which these affected the protection and conservation of wild pollinators.

The EU biodiversity strategy to 2020 does not include specific actions for wild pollinators

**14** The EU biodiversity strategy to 2020 aims to halt the loss of biodiversity and ecosystem services in the EU. In 2011, the Commission adopted the strategy for the period up to 2020. According to the Commission, four out of the six targets set in the strategy indirectly benefit wild pollinators in the EU (see *Box 1*).

## Box 1

### The EU biodiversity strategy 2011-2020

The EU biodiversity strategy to 2020 includes six targets to halt biodiversity loss and the degradation of ecosystem services:

- (1) Fully implementing the nature Directives (Habitats and Birds Directives);
- (2) Maintaining and enhancing ecosystems and their services;
- (3) Increasing the contribution of agriculture and forestry to biodiversity;
- (4) Ensuring the sustainable use of fisheries resources;
- (5) Combating invasive alien species;
- (6) Stepping-up action to tackle the global biodiversity crisis.

The Commission considered targets 1, 2, 3 and 5 to be beneficial for wild insect pollinators and their ecosystem services in the EU.

**15** The 2015 mid-term review of the strategy<sup>12</sup> concluded that biodiversity loss and the degradation of ecosystem services in the EU have continued since 2010, and mentioned pollination as one of the most degraded ecosystem services, particularly in woodland and forests, heathland and shrubs, and grasslands. Of the four targets considered beneficial for wild pollinators, the review reported that target 5 was on track with implementation. The remaining three registered progress at insufficient rate (targets 1 and 2) or did not register significant progress (target 3).

**16** In its 2019 report on the state of the European environment, the EEA said that nine of the 13 specific policy objectives set for 2020 in the area of protecting, conserving and enhancing European biodiversity and nature will largely not be on track in 2020<sup>13</sup>. The nine targets included the EU protected species and habitats, the common species (birds and butterflies), and the ecosystem condition and services, addressed in the EU biodiversity strategy to 2020. The Commission is currently

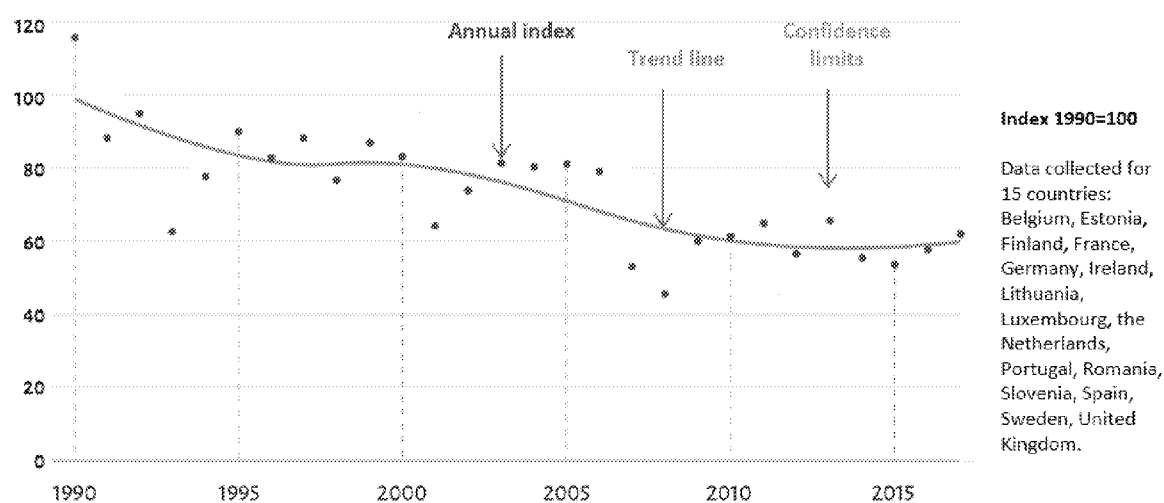
<sup>12</sup> Report from the Commission to the European Parliament and the Council “The Mid-Term Review of The EU Biodiversity Strategy to 2020”, COM/2015/0478 final, 2 October 2015.

<sup>13</sup> EEA, “The European environment - state and outlook 2020”, full report, Table ES.1 Summary of past trends, outlooks and prospects of meeting policy objectives/targets, p. 12.

conducting an evaluation of the strategy, and plans to publish the report at the end of 2020.

**17** In the absence of data for other insect species, monitoring data available for butterflies can provide information on the status of many other insects in the EU. EU Member States collect data for 17 grassland butterfly species under the European butterfly monitoring scheme. The European Environment Agency (EEA) uses this data to calculate the European grassland butterfly index. The index shows that since 1990 the population of monitored butterflies has declined by 39 %, indicating a considerable loss, though the situation has apparently stabilised since 2013 (see *Figure 4*).

**Figure 4 – Grassland Butterfly Index, 1990-2017**



Source: ECA based on EEA data.

## The Pollinators Initiative did not lead to changes in key policies and measures

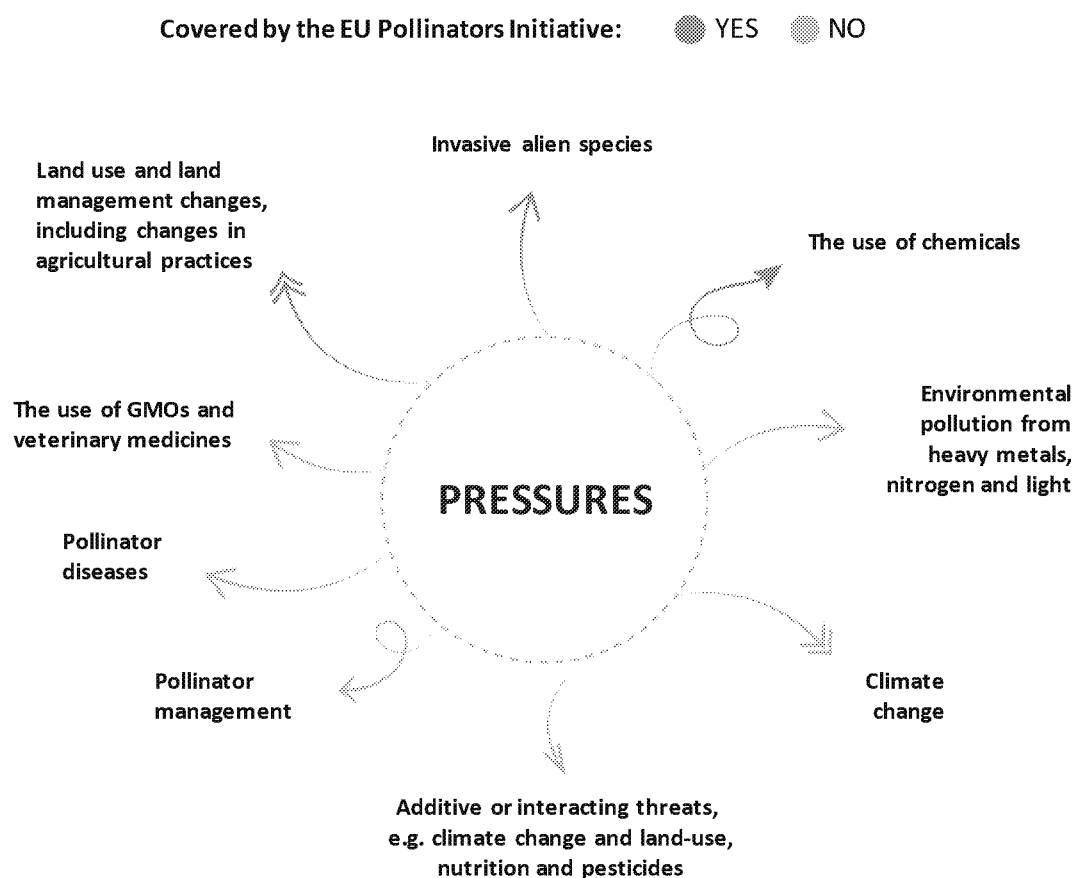
**18** In 2018, the Commission recognised the need for EU action to address the decline in wild pollinators through a Commission communication on wild pollinators (see paragraph 06). The Pollinators Initiative mainly aimed to increase the efficiency of existing tools, policies and legislation in the areas of the environment, pesticides, agriculture, cohesion, and research and innovation. Since the Pollinators Initiative is a Commission communication, it did not establish a legal framework for the protection and restoration of wild insect pollinators in the EU nor trigger the allocation of specific financial resources.

**19** The Pollinators initiative focused on three drivers of pollinator decline, for which it defined specific actions:

- the loss of habitats in urban and agricultural landscapes;
- the use of pesticides;
- invasive alien species.

The list of actions did not include measures on other direct threats identified by the IPBES report (see *Figure 5*). According to the communication, other dedicated EU policies and actions outside the initiative address some of these drivers (such as climate change). In certain areas, for example light pollution, the Commission could not propose measures due to the scarce research into this area at that time. Pressures caused by pollinators' diseases are mostly relevant for managed pollinators, and therefore not included.

**Figure 5 – Drivers of pollinators' decline**



Source: ECA based on from IPBES and the Commission.

## 20 The Pollinators Initiative included 31 actions:

- 10 on improving knowledge about pollinators and their decline,
- 14 addressing three of the main drivers of decline, and
- seven on raising public awareness about this issue.

Nine of the 14 actions proposed to tackle the main drivers of pollinators' decline focused on existing policies and measures in the areas of biodiversity and nature conservation, agriculture and pesticides (actions 4A-4C, 5A-5C, 7A-7C). These actions did not lead to changes in these policies and measures. In some cases, the Commission had already carried out the action before the list of actions was published (see *Box 2*).

### Box 2

#### The Pollinators Initiative did not always lead to changes in key policies and measures

- Action 4C requires Member States to define priority measures for pollinator species and habitats in their prioritized action frameworks for the management of Natura 2000 sites. The Commission and Member States developed the 2021-2027 template for these frameworks in 2018 without including such a request (see paragraph 29).
- Action 5C asks Member States to consider the protection of pollinators in their 2022-2027 CAP strategic plans, and the Commission to include a pollinator indicator in the performance and monitoring framework of the CAP. The Commission did not include any references to pollinators in their post-2020 CAP legislative proposals published in June 2018. Member States are currently preparing CAP strategic plans without any guidance on the integration of pollinator considerations.
- Action 7C requires the Commission to ban all outdoor uses of three neonicotinoids. The ban was already in force from May 2018, before the publication of the Pollinators Initiative. Including this action in the plan did not bring any added value.

## The Pollinators Initiative lacks governance and control mechanisms

21 The Directorate-General for the Environment (DG Environment) leads the overall implementation of the Pollinators Initiative, and is directly responsible for 24 out of 31 actions. The Directorate-General for Health and Food Safety (DG SANTE) should



carry out four actions, and Member States the remaining three actions. Other Commission directorates<sup>14</sup> co-lead or are consulted.

**22** The Commission designated an official in DG Environment to work full time on the Pollinators Initiative. It estimated that staff in DG SANTE involved in actions related to the protection of pollinators from the use of pesticides contributed also one full time equivalent. We found that the Commission did not set up clear roles and responsibilities for the Commission directorates involved. At the date of our audit, the Commission had not organised progress meetings with relevant stakeholders nor defined monitoring and reporting arrangements to review the progress of the actions. There are no targets or criteria defined to assess whether the actions achieved their objectives.

### Biodiversity and agriculture policies do not include specific requirements for the protection of wild pollinators

**23** We examined the safeguards for wild insect pollinators in the EU biodiversity conservation measures and the CAP. With respect to biodiversity conservation, we examined the Habitats Directive, including the monitoring of species in Natura 2000 sites. For the CAP, we analysed the main measures with environmental objectives, both carried out in the 2014-2020 period and proposed for 2021-2027.

### The Commission did not use some of the options available in biodiversity conservation measures

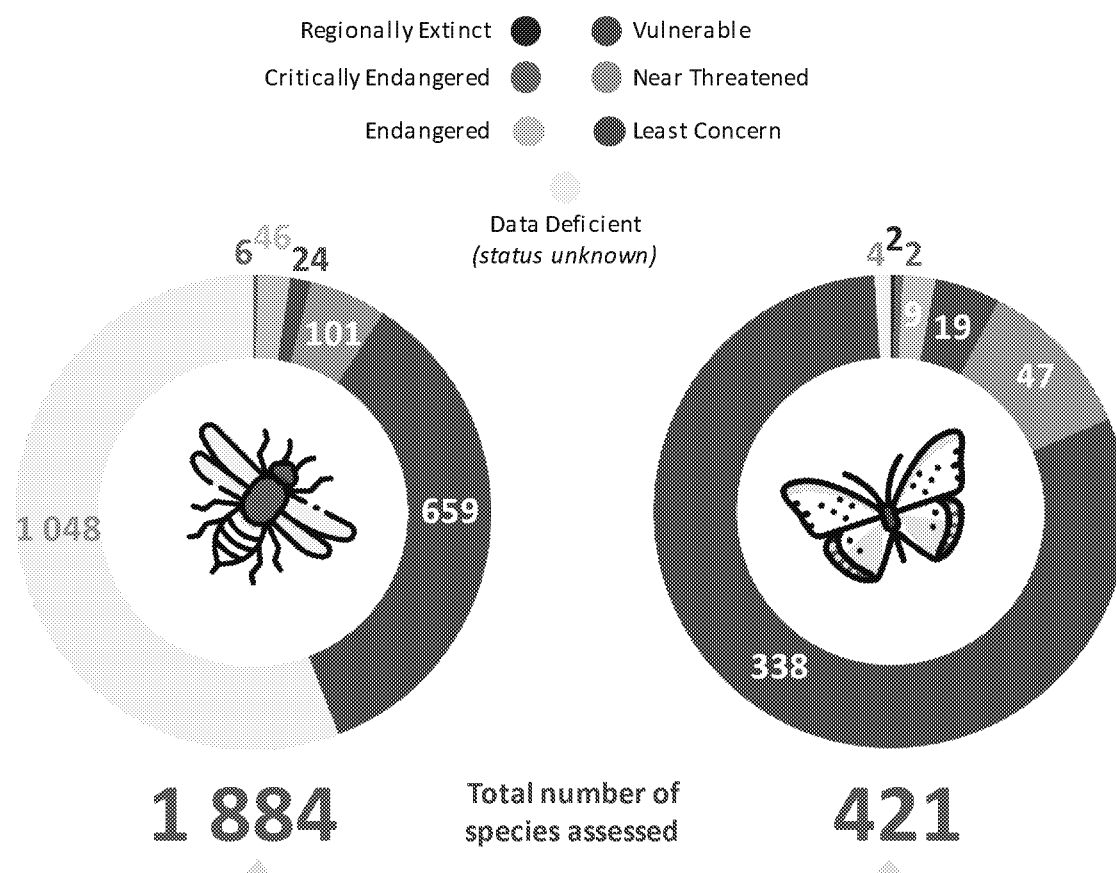
**24** In 1964, the International Union for Conservation of Nature (IUCN) introduced the red list of threatened species. Red lists are inventories of the conservation status of biological species. The Commission funded the creation of a European red list for butterflies in 2010 and one for bees in 2014<sup>15</sup>. These two assessments tell us that there are around 1 900 bee species and 421 butterfly species in the EU. For example, 659 bees species are classified as least concerned, and six as threatened with extinction. However, there is no information available on the conservation status for 1 048 bee species (see *Figure 6*). According to the IUCN assessment process, red lists

<sup>14</sup> DG Agriculture and Rural Development, DG Health and Food Safety, DG Research and Innovation, the Joint Research Centre, and DG International Cooperation and Development.

<sup>15</sup> Van Swaay C. et al., "European Red List of Butterflies", 2010, Publication Office of the European Union. Nieto A. et al., "European Red List of Bees", 2014, Publication Office of the European Union.

expire after 10 years, and, in the absence of updates, red lists cannot be used as indicators of trends over time. The Commission informed us that it intends to update the two red lists and publish new red lists for hoverflies and moths.

Figure 6 – Conservation status of bees and butterflies in the EU



Source: ECA based on the European red lists for bees and butterflies.

**25** The Commission and Member States carry out the EU policy for the preservation of biodiversity through the Habitats and Birds Directives, also referred to as the Nature Directives. Since 1992, the Habitats Directive<sup>16</sup> aims to promote the conservation of rare, threatened or endemic habitats, animal species and plant species. The Directive includes 56 species of wild insect pollinators. 42 are butterfly species, and the rest are moths and beetles. Of the 11 butterfly species identified in the red list as being critically endangered and endangered in the EU (without Croatia), four are protected by the Habitats Directive. The Directive does not include any of the 52 critically

<sup>16</sup> Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ L 206, 22.7.1992, p. 7).

endangered and endangered bee species, impacting the monitoring and financing options available for their protection.

**26** The Habitats Directive requires Member States to report to the Commission every six years on the implementation of the conservation measures put in place under the Habitats Directive<sup>17</sup>, including information on the conservation status of the habitats and species protected. Hence, information on the wild insect pollinators covered by the Directive is available every six years through this exercise. The EEA compiles the data reported by Member States and summarises it in the state of nature report. The most recent report available at the time of our audit, published in 2015<sup>18</sup>, did not include any reference to the conservation status of the butterflies, moths or beetles protected. The report quoted an independent study on butterflies in six EU countries and regions, conducted outside the Natura 2000 sites, which concluded that butterflies in protected areas are declining at the same rate as butterflies outside protected areas<sup>19</sup>. The report also stated that Natura 2000 sites have a positive impact on the abundance of specialist species of butterflies.

**27** Since 2008, the Commission has developed EU action plans for selected species and habitats to assist Member States in their conservation. For example, in 2012, the Commission published an EU action plan for a critically endangered butterfly species, the Danube clouded yellow butterfly, setting out dedicated conservation and restoration actions to be carried out by Member States on a voluntary basis. We found that the EU action plan had no impact on the decline of this butterfly species. In 2018, the Danube yellow clouded butterfly had a poor conservation status in the EU (see *Box 3*).

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<sup>17</sup> Article 17 of Council Directive 92/43/EEC.

<sup>18</sup> EEA, “State of nature in the EU – Results from reporting under the nature directives 2007–2012”, Technical report no 2/2015, 2015.

<sup>19</sup> Pellissier, V. et al., “The impact of Natura 2000 on non-target species, assessment using volunteer-based biodiversity monitoring”, EEA – European Topic Centre on Biological Diversity, Technical paper no 4/2014, 2014.

## Box 3

The Danube clouded yellow butterfly (*Colias myrmidone*)

The Danube clouded yellow butterfly is the single critically endangered butterfly species included in the Habitats Directive and the European red list of butterflies. Since 2012, an EU specific action plan<sup>20</sup> has addressed the decline of this butterfly, in addition to the conservation and restoration measures included by Member States in the management of the Natura 2000 sites. The Commission does not allocate specific financial resources to Member States to carry out EU species action plans.

The action plan required Member States to put in place a set of actions listed in this EU plan, and set up additional specific monitoring arrangements for the Danube clouded yellow butterfly. To date, the Commission has not assessed the actions carried out by the Member States nor their specific monitoring arrangements.

In 2018, according to data available for Natura 2000 sites, the conservation status of this butterfly remained inadequate or poor in seven out of the 11 Member States where the butterfly was reported as being present. The status was unknown in the other four<sup>21</sup>.

**28** In October 2019, the Commission published the first action plan for the maintenance and restoration of a habitat: semi-natural calcareous grasslands and scrublands. The EU action plan recognised this habitat as being highly important for wild pollinator species, and included their preservation in its general objectives. The Commission did not define specific actions or measures to achieve that objective, and did not mention any monitoring and evaluation requirements.

**29** The multi-annual prioritised action frameworks (PAFs) are strategic planning tools to manage Natura 2000 sites. Member States describe their biodiversity and nature conservation needs, measures to address them and financing requirements in the PAFs. According to the Habitats Directive, Member States should send updated PAFs to the Commission every seven years, in line with the Commission's financial framework. According to the Pollinators Initiative, Member States should address measures for important pollinator habitats in the PAFs. The Commission and the Member States

<sup>20</sup> European Commission, "Action Plan for the Conservation of the Danube Clouded Yellow *Colias myrmidone* in the European Union", 13 April 2012.

<sup>21</sup> Data available at <https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards/conservation-status-and-trends>.

validated the 2021-2027 PAF template in April 2018, without adding any requirements for pollinators.

**30** One of the objectives of the EU's funding instrument for the environment and climate action (LIFE) is to contribute to the development and execution of EU policies in the area of nature and biodiversity, including conserving and restoring populations of species listed in the Habitats Directive. Member States and the Commission co-fund specific projects in the LIFE Programme<sup>22</sup>. Around a quarter of LIFE projects focus on habitats. According to the Commission, addressing the conservation needs of pollinators through habitats is likely to be more effective and cost-efficient overall compared to other approaches. Since the focus of these projects is not on pollinators, the Commission does not always monitor or assesses their impact on pollinator species. Only 22 of the 5065 LIFE projects funded in the 1992-2018 period aimed specifically to protect and restore pollinator populations and pollination services.

**31** Since 2018, the LIFE programme can fund projects focusing on species classified as critically endangered or endangered in the European or international red lists. At the time of our audit, no project sought to protect threatened bees and butterflies not listed in the Habitats Directive.

### The CAP does not include specific legal provisions for wild pollinators

**32** Almost half of EU territory is covered by agricultural land. The EEA has concluded that "since the 1950s, traditional farm management, which favoured a range of landscapes, habitats and plant and animal species, was replaced by a rapid industrialisation of agriculture characterised by a wide-spread intensification of farming methods"<sup>23</sup>. Intensive agriculture is a driver of pollinators' decline<sup>24</sup>. Around 38 % of the overall EU budget for 2014-2020 allocated to supporting agriculture, and the CAP has been "particularly influential in shaping European landscapes and the nature they contain"<sup>25</sup>. Several instruments in the 2014-2020 CAP aim to protect and improve biodiversity (see *Figure 3*), in particular cross-compliance, the greening

<sup>22</sup> Regulation (EU) No 1293/2013 of the European Parliament and of the Council on the establishment of a Programme for the Environment and Climate Action (LIFE) (OJ L 347, 20.12.2013, p. 185).

<sup>23</sup> EEA, SOER 2015, Agriculture Briefing, 15 November 2016.

<sup>24</sup> IPBES, "The assessment report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services on pollinators, pollination and food production", 2016.

<sup>25</sup> EEA, SOER 2020, Chapter 13 "Environmental pressures and sectors", p. 295.

payment scheme and the agri-environment-climate measures. But no specific legal provisions protect wild pollinators.

**33** Cross-compliance provides a link between CAP payments and the farmers' compliance with basic requirements (statutory management requirements, SMRs, which apply to all farmers whether they receive EU funding or not), and with standards of good agricultural and environmental conditions (GAECs, which do not apply to farmers in the Small Farmers Schemes)<sup>26</sup>. SMRs related to the environment stem from legal obligations in the Nature and Water Directives<sup>27</sup>. GAECs aim to ensure that farmers protect the soil, water, landscape features, habitats and wildlife on farmland. For our recent assessment of the effects of cross-compliance on farmland biodiversity see *Box 4*.

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<sup>26</sup> Annex II, Regulation (EU) No 1306/2013 of 17 December 2013 of the European Parliament and of the Council on the financing, management and monitoring of the common agricultural policy and repealing Council Regulations (EEC) No 352/78, (EC) No 165/94, (EC) No 2799/98, (EC) No 814/2000, (EC) No 1290/2005 and (EC) No 485/2008 (OJ L 347, 20.12.2013, p. 549).

<sup>27</sup> Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources (OJ L 375, 31.12.1991, p. 1).

#### Box 4

##### Special report 13/2020 – Biodiversity on farmland: CAP contribution has not halted the decline

The SMR component of cross-compliance did not provide farmers with additional incentives to maintain and enhance farmland biodiversity, as these requirements replicate existing rules.

GAEC standards referring to the establishment of buffer strips along watercourses (GAEC 1), minimum soil cover (GAEC 4), land management to limit soil erosion (GAEC 5), maintenance of soil organic matter level (GAEC 6), and the retention of landscape features (GAEC 7) have the greatest potential in terms of supporting agricultural biodiversity, but the legislative framework gives Member States a high degree of flexibility to define their content. In most cases, paying agencies check between 1 % and 2 % of farms subject to a specific GAEC standard, and impose penalties for around 1 % of those checked.

The report concluded that certain cross-compliance standards could make a significant contribution to biodiversity, but these standards provide weak incentives. Neither the Commission nor the Member States have measured the impact of cross-compliance on biodiversity.

**34** The Commission introduced the greening payment in 2013 to enhance the CAP's environmental performance through three farming practices that farmers must comply with: crop diversification (farmers with more than 10 hectares of arable land), maintenance of permanent grassland or ecological focus areas (EFAs – farmers with more than 15 hectares of arable land). In 2017, the ECA published a report on greening<sup>28</sup>. The report concluded that due to the low requirements of greening, the measure did not lead to significant changes in management practices. Our report on farmland biodiversity further found that biodiversity benefits little from greening (see *Box 5*).

<sup>28</sup> ECA special report 21/2017 "Greening: a more complex income support scheme, not yet environmentally effective".

## Box 5

## Special report 13/2020 – Biodiversity on farmland: CAP contribution has not halted the decline

The potential of EFAs to deliver biodiversity benefits depends on the types of EFA implemented and how farmers manage them. Member States and farmers typically favour low-impact options such as catch or nitrogen-fixing crops.

Overall, the report concluded that biodiversity benefits little from greening, and that greening has triggered few changes in farming practices.

**35** According to the evaluation of the greening measure published by the Commission in 2017<sup>29</sup>, EFAs have the greatest potential to provide food resources and nesting ground for wild pollinators. The report stated that the most beneficial EFA types are the nitrogen-fixing crops, catch and cover crops (depending on farming practices, see paragraph 36), fallow land, landscape features (hedgerows and wooded strips, and tree groups), field margins and buffer strips. As recommended by the Parliament, in 2018 the legislator introduced two new EFA types specifically referring to plant species beneficial for pollinators: land lying fallow for melliferous plants (pollen and nectar rich plants) and the cup plant (*Silphium perfoliatum*)<sup>30</sup>.

**36** The CAP defined 13 EFA options<sup>31</sup> from which Member States could choose. In 2018, most Member States opted for catch and cover crops, nitrogen-fixing crops and land lying fallow, representing 96 % of the total agricultural land declared as EFA (see *Figure 7*). As in the case of GAECs, the impact of these EFAs on pollinators depends on the management requirements and conditions established by the Member States (such as location, cutting and harvesting dates, and the use of pesticides and

<sup>29</sup> European Commission, “Evaluation study of the payment for agricultural practices beneficial for the climate and the environment”, 2017.

<sup>30</sup> Regulation (EU) 2017/2393 of the European Parliament and of the Council of 13 December 2017 amending Regulations (EU) No 1305/2013, (EU) No 1306/2013, (EU) No 1307/2013, (EU) No 1308/2013 and (EU) No 652/2014 (OJ L 350, 29.12.2017, p. 15).

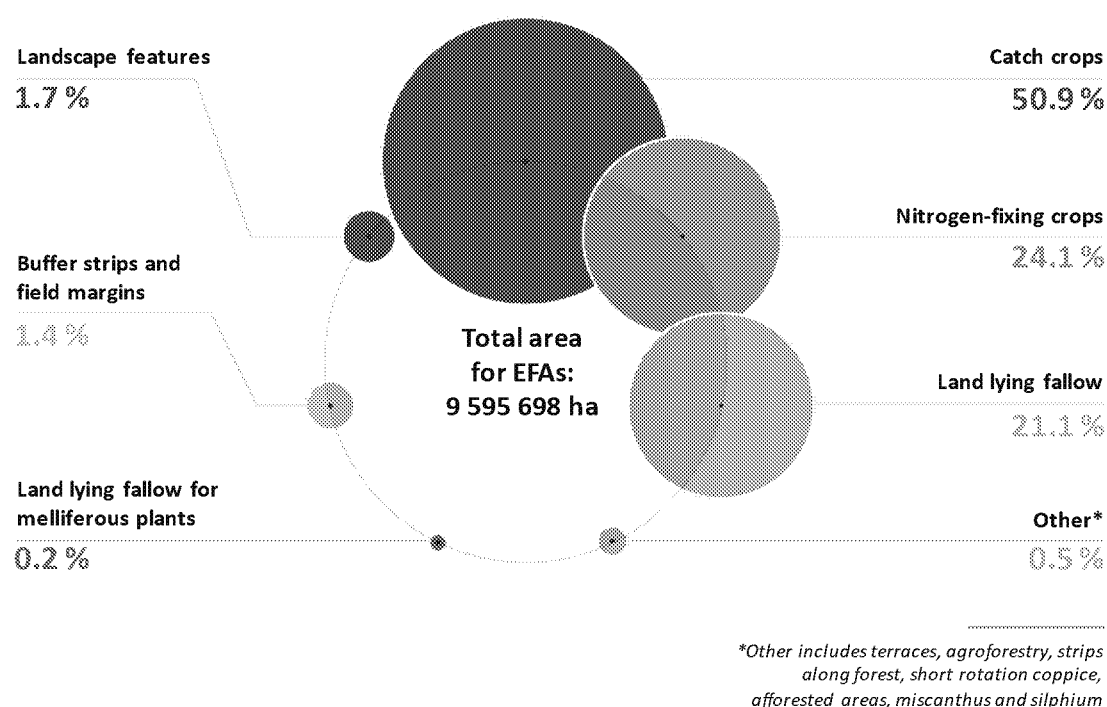
<sup>31</sup> Regulation (EU) No 1307/2013 of the European Parliament and of the Council (OJ L 347, 20.12.2013, p. 608) and Commission Delegated Regulation (EU) No 639/2014 of 11 March 2014 supplementing Regulation (EU) No 1307/2013 of the European Parliament and of the Council establishing rules for direct payments to farmers under support schemes within the framework of the common agricultural policy and amending Annex X to that Regulation (OJ L 181, 20.6.2014, p. 1).



fertilisers). For example, cutting catch, cover or nitrogen-fixing crops before or during flowering has no benefits for pollinators. According to the Commission's evaluation of the greening measure, in the majority of cases farmers cut or plough in such crops before they flower. Land lying fallow benefits pollinators when sown with wildflowers, and leaving the soil bare has no benefit. The Commission did not define any specific management requirements for land lying fallow, and Member States do not provide information on how farmers manage land lying fallow.

**37** In 2017, the Commission banned the use of pesticides on EFAs relating to land lying fallow, including for melliferous plants and cup plant, catch crops, green cover and nitrogen-fixing crops<sup>32</sup>. Unless Member States have restricted pesticide use for other EFAs, farmers may apply pesticides on field margins, buffer strips and other non-productive landscape features.

**Figure 7 – EFA options in the EU in 2018**



Source: ECA based on information from the Commission.

**38** Member States can also use agri-environment-climate measures (AECMs) to create conditions and habitats favourable to pollinators. AECMs provide payments to farmers who voluntarily subscribe to environmental commitments of five to seven

<sup>32</sup> Commission Delegated Regulation (EU) 2017/1155 of 15 February 2017 amending Delegated Regulation (EU) No 639/2014 and amending Annex X to Regulation (EU) No 1307/2013 (OJ L 167, 30.6.2017, p. 1).

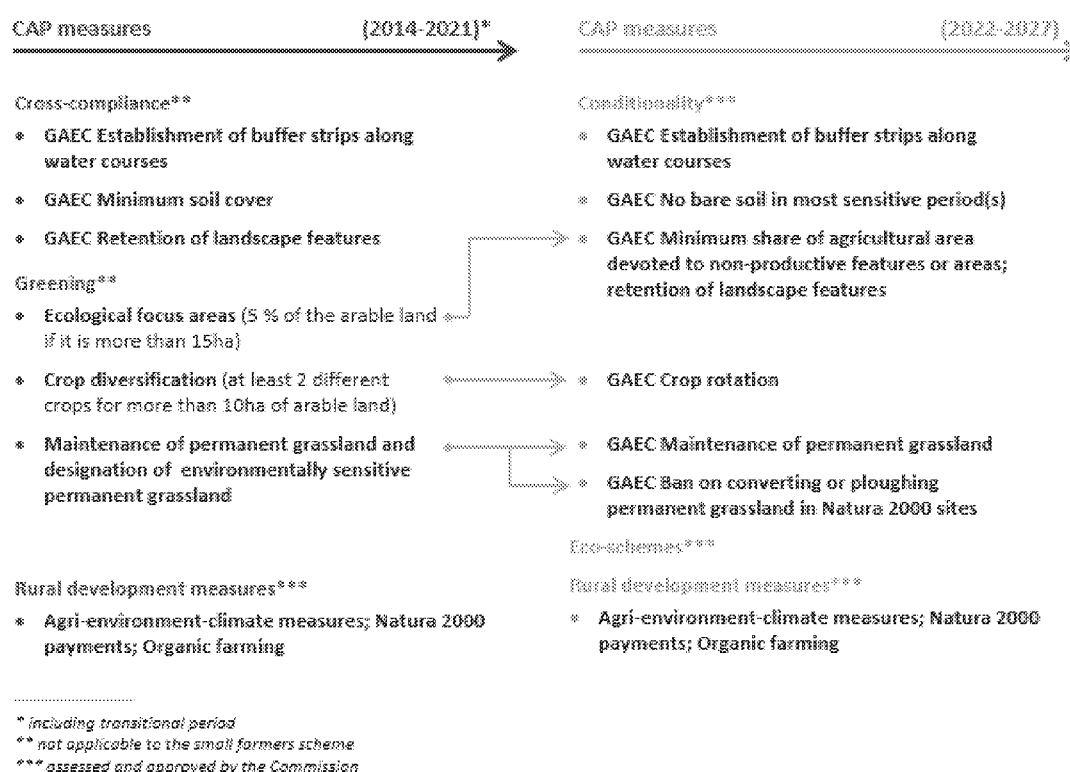
years related to a wide range of environmental issues. According to a recent evaluation of the impact of the CAP on biodiversity<sup>33</sup>, targeted AECMs, such as maintaining existing semi-natural habitats and landscape features, or creating new habitats, are the most-beneficial CAP measures for wild pollinators. The evaluation also indicated that the uptake of these measures by Member States and farmers would not be sufficient to support the recovery of the wild populations of pollinators.

**39** The 2021-2027 CAP legislative proposals introduce conditionality to replace current greening and cross-compliance requirements. Conditionality sets out a set of obligations that, under the Commission proposals, farmers receiving CAP payments should fulfil. The proposals also introduce a new system of climate and environment schemes (the eco-schemes). Member States must establish a list of eligible agricultural practices beneficial to the climate and the environment for each eco-scheme proposed to farmers, in line with one or more of the specific environmental objectives set at EU level. Eco-schemes remain voluntary for the farmers. The Commission did not propose major changes for AECMs in the 2021-2027 CAP legislative proposals (see *Figure 8*).

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<sup>33</sup> European Commission, “Evaluation of the impact of the CAP on habitats, landscapes and biodiversity”, November 2019.

**Figure 8 – CAP measures of potential benefit to wild pollinators in the current and forthcoming periods**



Source: ECA based on Commission information.

**40** Under the Commission proposals, conditionality would not include the productive EFAs (such as catch and cover crops, and nitrogen fixing crops) currently allowed as meeting greening requirements, but it maintains the requirement for a minimum share of non-productive areas and the retention of landscape features. In addition, the thresholds for applying the greening requirements (such as a minimum of 15 ha of arable land for EFAs) would no longer apply. The Commission has proposed that Member States describe each GAEC in their CAP strategic plans, including a summary of the farming practices, the territorial scope and the type of farmers concerned. The Commission would have the responsibility to check the design of GAECs and eco-schemes in Member States' CAP strategic plans. Since the Commission did not include the protection of pollinators or pollination services in the objectives of the eco-schemes, there is no guarantee that Member States will define any specific schemes relevant for wild pollinators in their CAP strategic plans.

## The pesticides legislation included safeguards for honey bees, but some are not applied

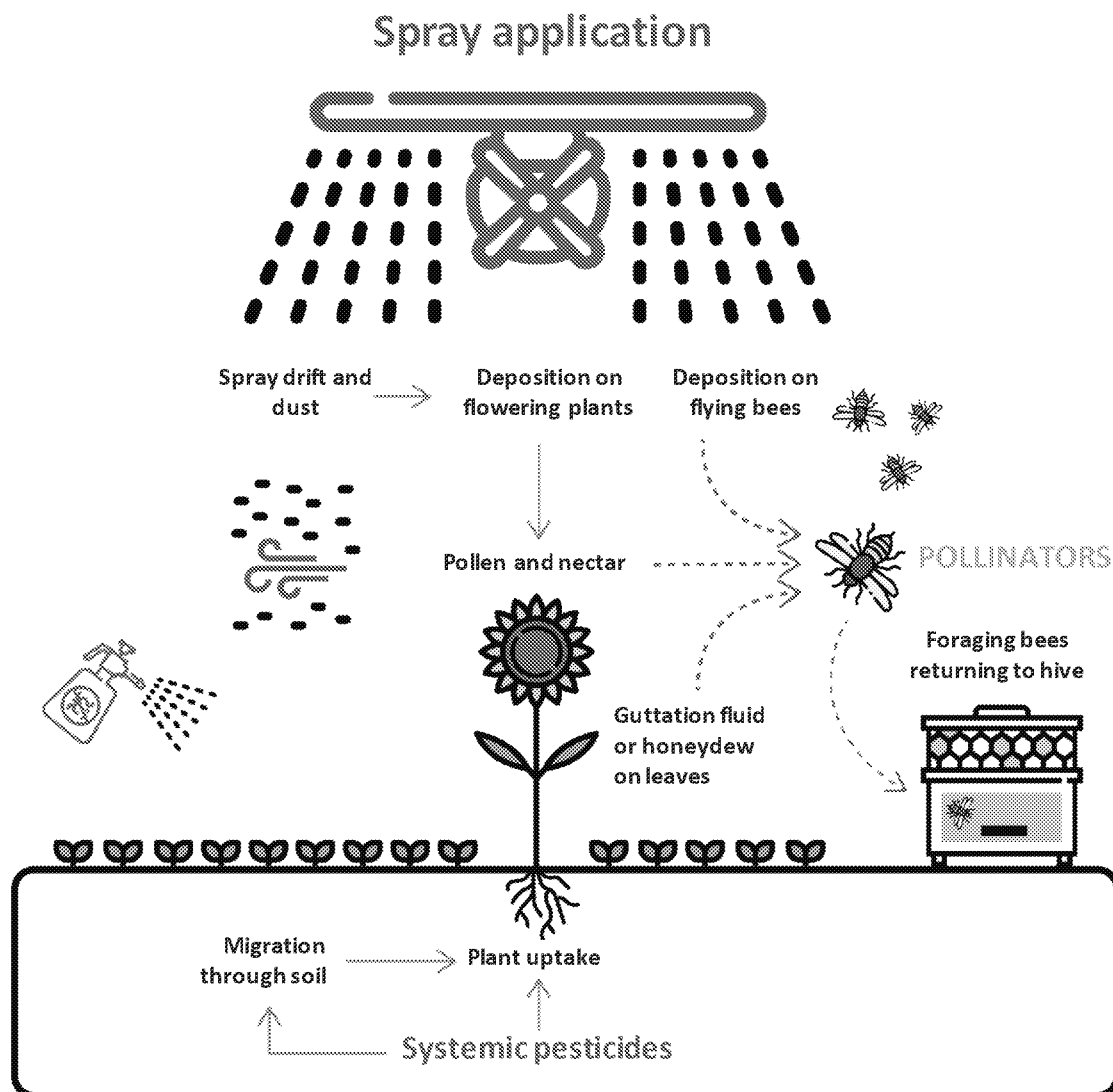
**41** We examined whether the Commission had included provisions to protect wild pollinators in the legislative framework regulating the use of pesticides in Europe. We also checked whether the Commission had analysed the process of assessing the risk of pesticides to wild pollinators to identify weaknesses in the process, and if it had taken corrective action.

## EU legislation on PPPs requires the protection of honey bees

**42** Pesticides, referred to in the legislation as plant protection products (PPPs), are used to prevent, destroy or control harmful organisms and diseases. They are used to protect plants and plant products before, during and after harvesting. PPPs comprise one or more active substances, which are responsible for the product's effects.

**43** Pollinators are frequently exposed to PPPs. PPPs can have a direct harmful effect on pollinators when they come into direct contact with spray residue on plants or contaminated dust, consume pollen and nectar containing residues of PPPs, drink contaminated water or are exposed to contaminated material in their nests. PPPs can have also an indirect harmful effect. For example, herbicides reduce both the quantity and diversity of floral resources, with an important negative impact on the food supply of pollinators. Pollinators depend upon the presence of a variety of flowering species throughout the part of the year in which they are active. They may depend on specific flowering species – and these may include plants that have no other value to farmers, and are thus treated as undesirable weeds. How PPPs affect pollinators depends on the products used, on the length of time the products persist in the environment, and on where, when and how the products are applied. *Figure 9* details how insect pollinators can be exposed to PPPs.

Figure 9 – Pesticide exposure routes for pollinators



Type of effect:	Type of toxicity:	Type of exposure:	Who is affected:
<ul style="list-style-type: none"> <li>• Lethal</li> <li>• Sub-lethal (affecting behaviour, immunity, reproductive function etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Acute (short term)</li> <li>• Chronic (long term)</li> </ul>	<ul style="list-style-type: none"> <li>• Oral (ingestion)</li> <li>• Contact</li> <li>• Inhalation</li> </ul>	<ul style="list-style-type: none"> <li>• Adults</li> <li>• Larvae</li> </ul>

Source: ECA based on EFSA information.

**44** The first time that EU legislation on pesticides<sup>34</sup> specifically mentioned pollinators was in 1991. It required applicants to submit information on the short-term (acute) toxicity of active substances to honey bees, and information on the toxicity of PPPs outside the laboratory, in field conditions. In 2009, the legislator increased the

<sup>34</sup> Council Directive 91/414/EEC of 15 July 1991 concerning the placing of PPPs on the market (OJ L 230, 19.8.1991, p. 1).

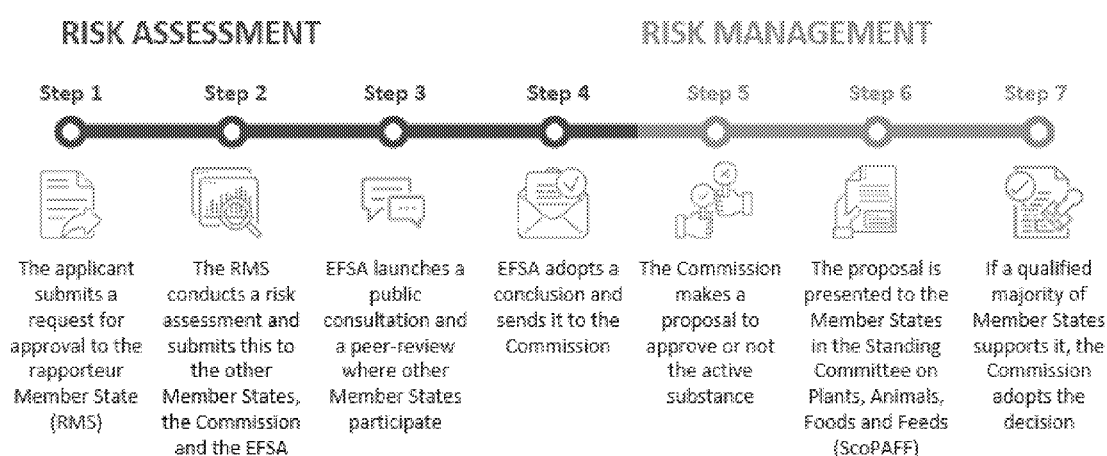
protection of honey bees in the PPPs Regulation<sup>35</sup> by supplementing short-term exposure tests with:

- long-term exposure (chronic) toxicity tests, and
- tests of sub-lethal effects on adult honey bees and their larvae.

The PPPs Regulation did not include specific safeguards for wild pollinator species.

**45** All PPPs are subject to a two-step authorisation procedure. The Commission first approves active substances on the basis of scientific assessments. Member States can then authorise the sale and use of PPPs containing one or more approved active substances on their territory. The decision whether to approve an active substance or not is based on two distinct steps as presented in *Figure 10*.

**Figure 10 – Process of approval of active substances**



Source: ECA based on Commission information.

<sup>35</sup> Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of PPPs on the market and repealing Council Directives 79/117/EEC and 91/414/EEC (OJ L 309, 24.11.2009, p. 1).

## The risk assessment procedure for honey bees is not currently aligned with legal requirements

**46** Data requirements<sup>36</sup> and uniform principles<sup>37</sup> define the evaluation and decision making criteria for active substances and PPPs. The Commission provides guidance for applicants setting out how the risk from the use of active substances and PPPs on honey bees should be assessed. The Commission adopted the guidance in 2002<sup>38</sup>.

**47** According to this guidance, applicants shall assess the risks of active substances to honey bees only on the basis of their acute toxicity. The guidance does not take into account the potential effects of chronic or repeated exposure of adult honey bees to these substances, although required from 2009 onwards for all active substances and PPPs by the PPPs Regulation. *Box 6* provides more details on the current risk assessment criteria.

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<sup>36</sup> Commission Regulation (EU) No 283/2013 of 1 March 2013 setting out data requirements for active substance (OJ L 93, 3.4.2013, p. 1) and Commission Regulation (EU) No 284/2013 of 1 March 2013 setting out data requirements for plant protection products, in accordance with Regulation (EC) No 1107/2009 (OJ L 93, 3.4.2013, p. 85).

<sup>37</sup> Commission Regulation (EU) No 546/2011 of June 2011 implementing Regulation (EC) No 1107/2009 as regards uniform principles for evaluation and authorisation of plant protection products (OJ L 155, 11.6.2011, p. 127).

<sup>38</sup> Guidance Document on terrestrial Ecotoxicology under Council Directive 91/414/EEC, SANCO/10329/2002.

## Box 6

### The current European risk assessment scheme for the effect of PPPs on honey bees

The European and Mediterranean Plant Protection Organisation established the standards currently used in the EU to assess the risk of PPPs on bees. To establish whether a PPP is toxic or not to bees, the level of risk is estimated through the calculation of a hazard quotient.

The hazard quotient is the ratio between the environmental exposure of bees to a PPP and the short-term (acute) toxicity of that PPP. If the value of the hazard quotient is lower than 50, a low risk to bees is concluded and no further tests are required. If the value is above 50, further tests must be conducted in semi-field or field conditions (referred to as higher tier tests). There are no trigger values defined for higher tier tests, and expert judgement is needed to interpret their results. The EU risk assessment scheme for the effect of PPPs on bees refers to managed honey bees. The route of exposure considered is spray application, which makes the scheme unsuitable for PPPs that are applied to soil or seeds (such as neonicotinoids).

**48** In 2011, the Commission asked EFSA to prepare an updated guidance document on the risk assessment of PPPs on bees in line with the PPPs Regulation. EFSA published this document in 2013<sup>39</sup>.

**49** The 2013 EFSA guidance document included new requirements for chronic and sub-lethal toxicity tests on honey bees, adult and larvae, as required from 2009 onwards by the PPPs Regulation. These requirements also referred to additional bee species: the bumble bee and the solitary bee. The document included new routes of exposure to PPPs such as the exposure to dust particles (specifically relevant for PPPs applied as seed treatment), and the consumption of contaminated nectar and water (guttation fluid, surface water and puddles). The guidance also extended and refined the risk assessment scheme applied for the exposure to pollen and nectar contaminated with substances resulting from the decomposition of PPPs in plants (metabolites), as some of these substances can be more toxic than the PPP they came from.

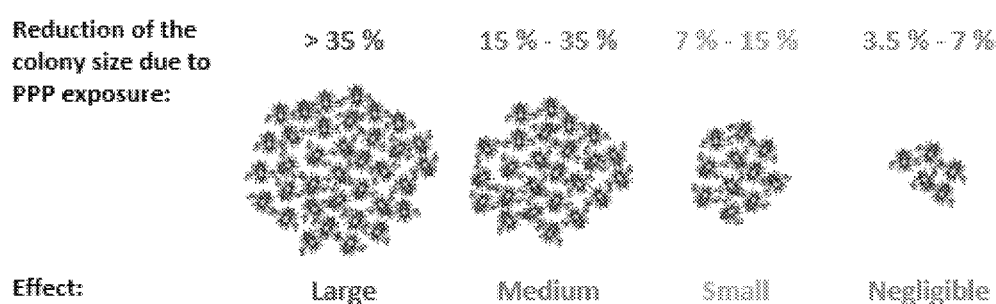
**50** The PPPs Regulation defined general protection goals for honey bees, but did not include specific criteria (so-called specific protection goals) to be used when assessing

<sup>39</sup> EFSA, "Guidance Document on the risk assessment of plant protection products on bees (*Apis mellifera*, *Bombus* spp. and solitary bees)", 4 July 2013, updated on 4 July 2014.



test results. According to EFSA, specific protection goals are essential to design an appropriate risk assessment scheme. EFSA included in the 2013 bee guidance specific protection goals for the three bee species considered (honey bees, bumble bees and solitary bees). According to the document, the magnitude of honey bee loss in colonies exposed to PPPs should not exceed a 7 % reduction in colony size (see *Figure 11* for more details), with additional safety factors for bumble bees and solitary bees.

**Figure 11 – Reduction in colony size used to establish specific protection goals for bees in the 2013 EFSA guidance document**



Source: ECA based on EFSA 2013 Bee Guidance Document, Appendix A.

**51** The 2013 EFSA guidance document recommended to assess the risk of PPPs on bees in steps (a tiered approach), from simpler tests conducted in the laboratory (first-tier tests) to more complex tests conducted outside the laboratory (higher tier tests), in semi-field conditions (conducted using cages and tunnels) and field conditions.

**52** Since 2013, 12 Member States have supported the 2013 EFSA guidance document, but the remaining Member States consistently objected to its endorsement. The Commission discusses draft implementing legislation and guidance on pesticides with the Member States through a dedicated committee (in this case, the Standing Committee on Plants, Animals, Food and Feed, ScoPAFF). The ScoPAFF did not approve the guidance at EU level. In a meeting held in Brussels in December 2013 it was concluded that the document could not be fully and immediately applied due to three main reasons:

- (1) few of the additional tests proposed were covered by available internationally agreed test methods;
- (2) the specific protection goals defined for honey bees, bumble bees and solitary bees led to decision criteria that were not realistic and based on a very low background mortality rate;
- (3) the methodology proposed for the higher tier tests required a large number of field plots and colonies.

**53** From 2013 until 2019, the Commission proposed to gradually apply the 2013 guidance document as published by EFSA, without addressing the three points raised by the Member States. The majority of Member States continued to reject this approach. In this period, the Commission did not ask EFSA to further analyse these points and provide an opinion. According to the Commission, this was primarily due to ongoing Court cases<sup>40</sup> against the 2013 restrictions of the three neonicotinoids (see paragraph 58). In March 2019, the Commission mandated EFSA to review the 2013 guidance document to identify potential sections to be revised. The review process is due to last until March 2021. In this review of the 2013 guidance document, the Commission asked EFSA, among other things, to:

- re-assess the background mortality rate of bees, and
- review the methodology applied to higher tier tests using realistic agro-environmental conditions.

**54** The Commission was not able to solve the first issue regarding missing test methods. Internationally agreed test methods have been developed since 2013, but the Commission did not ask applicants to use them. The 2013 guidance document also included tests for which there are still no internationally agreed test methods (see *Annex I*). Countries can develop internationally agreed test methods through the relevant test guideline programme of the OECD, and three Member States actually did this. The Commission can also make project proposals to OECD for the development of new test methods, but did not do so. The reason is that the proposing institution also has to lead the development of the test methods, which requires a high level of technical expertise. The Commission informed us that they do not have the expertise to take on such a role.

**55** In 2018, the scientific group providing advice to the Commission recommended to define protection goals for the environment, in the context of the requirement in the PPPs Regulation that PPPs should have no unacceptable effects on the environment. The Commission started this process in 2018. The scientific group did not recommend to define specific protection goals for honey bees nor other wild pollinators, but according to the Commission the process will include bees. The Commission could not inform us whether the process will lead to specific protection goals for wild bee species.

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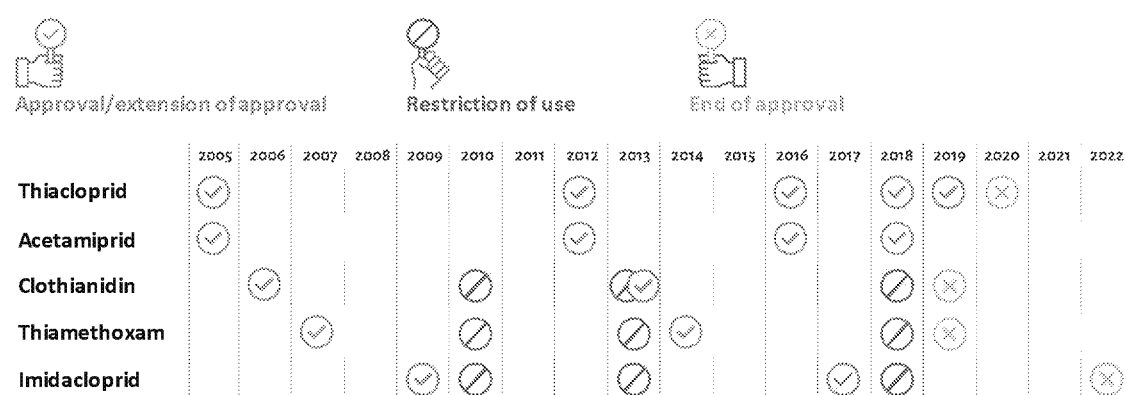
<sup>40</sup> Joined cases T-429/13 Bayer CropScience AG and others versus Commission, T-451/13 Syngenta Crop Protection AG and others versus Commission and T-584/13 Case BASF Agro BV and others versus Commission.

**56** In agricultural and urban landscapes, pollinators are typically exposed to multiple pesticides (for example a mix of insecticides, fungicides and herbicides). Since farmers can use multiple treatments on the same crop, pollinators visiting that crop are exposed to a mixture of PPPs (and active substances). The 2013 guidance document included a proposal on how to assess the toxicity for bees of PPPs containing more than one active substance. As Member States did not approve this guidance, the tests were not included in the current risk assessment scheme. In the beginning of 2020, EFSA started developing a methodology for assessing the effects of the combination of more than one active substance on honey bees (cumulative and synergistic effects).

The EU framework allowed Member States to continue granting emergency authorisations for banned PPPs which are harmful to pollinators

**57** Neonicotinoids are a class of pesticides that affects the nervous system of insects. Since their introduction in the early 1990s, neonicotinoids have been widely used to protect crops, mostly to treat seeds before they are planted. Neonicotinoids are systemic pesticides, meaning they are absorbed by the plant and circulate in the plant's tissue throughout its lifecycle. Since 2005, the Commission has approved the use of five neonicotinoids in the EU (see *Figure 12*).

**Figure 12 – Timeline of approval of the five neonicotinoids**



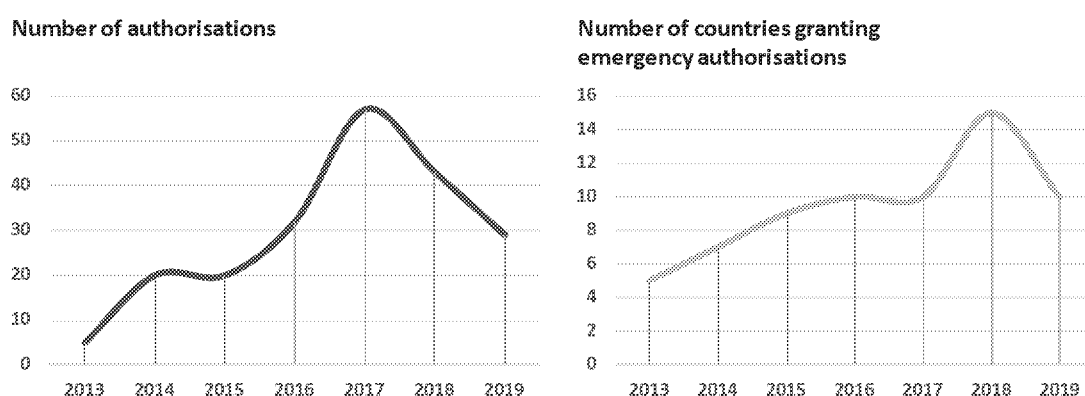
Source: ECA based on Commission information.

**58** In 2013, following several reports on massive honey bee losses attributed to the use of imidacloprid, thiamethoxam and clothianidin, the Commission restricted the use of the three neonicotinoids to greenhouses, winter crops and crops not considered

attractive to bees<sup>41</sup>. In April 2018, the Commission extended the ban to all outdoor uses of the three substances<sup>42</sup>.

**59** The PPPs Regulation allows Member States to bypass the standard procedure and grant emergency authorisations for PPPs not authorised on their territory, if pests cause a danger that cannot be contained in any other reasonable way. Between 2013 and 2019, Member States granted 206 emergency authorisations for the three restricted neonicotinoids (see *Figure 13*). The number of countries granting authorisations and the number of authorisations provided grew constantly until 2017. In spite of the full ban on outdoor use in the EU, in 2018 15 Member States permitted the three neonicotinoids for specific uses, and 10 Member States allowed their use in 2019. By the end of 2019, six Member States had already notified the Commission of 13 emergency authorisations applicable in the first half of 2020.

**Figure 13 – Emergency authorisations granted for using neonicotinoids between 2013 and 2019**



Source: ECA based on Commission information extracted from the PPPAMS system on 24 January 2020. The year corresponds to the year when the emergency authorisation was granted (and not when it entered into force).

<sup>41</sup> Commission Implementing Regulation (EU) No 485/2013 of 24 May 2013 amending Implementing Regulation (EU) No 540/2011 as regards the conditions of approval of the active substances clothianidin, thiamethoxam and imidacloprid, and prohibiting the use and sale of seeds treated with plant protection products containing those active substances (OJ L 139, 25.5.2013, p. 12).

<sup>42</sup> Commission Implementing Regulation (EU) 2018/783 (OJ L 132, 30.5.2018, p. 31-34), Commission Implementing Regulation (EU) 2018/784 (OJ L 132, 30.5.2018, p. 35-39) and Commission Implementing Regulation (EU) 2018/785 (OJ L 132, 30.5.2018, p. 40-44) of 29 May 2018 amending Implementing Regulation (EU) No 540/2011 as regards the conditions of approval of active substances imidacloprid, clothianidin and, respectively, thiamethoxam.

**60** Member States must notify the Commission when they grant emergency authorisations. The notification template includes sections requesting information about research activities undertaken by the Member State for all categories of dangers justifying the emergency. When the Member State repeats the authorisation in the following period, it should also indicate the progress achieved by these research activities. In 2018 and 2019, Member States sent 73 notifications to the Commission. 43 notifications did not include information on research activities conducted to find alternatives. Of the 30 providing information on alternatives, 11 referred to monitoring projects of the impact of these neonicotinoids on bees.

**61** In 2017, at the request of the Commission, EFSA analysed the emergency authorisations granted by Bulgaria, Estonia, Finland, Hungary, Latvia, Lithuania and Romania in the same year. EFSA concluded that four Member States could have used suitable chemical or non-chemical alternatives (such as crop rotation or soil tillage), or could not scientifically justify the danger. In 2018, the Commission asked Bulgaria, Hungary, Lithuania and Romania to stop granting authorisations for specific PPPs containing imidacloprid, thiamethoxam and clothianidin. Lithuania and Romania continued granting emergency authorisations in 2018 and 2019 for cases in which suitable alternatives were available. On 3 February 2020, the Commission legally obliged Lithuania and Romania to stop granting emergency authorisations for those uses where EFSA had identified available alternatives<sup>43</sup>.

**62** Member States generally grant emergency authorisations because they consider that there are no suitable alternatives to protect their crops. Farmers in the EU largely used neonicotinoids for seed treatments in major crops such as maize, sunflower, rapeseed and beets. At the time of the partial ban in 2013, the Commission had not initiated research projects focusing on alternative solutions, such as low-risk pesticides or alternative methods. In 2019 the Commission included two research projects in its work programme for the Horizon 2020 instrument.

**63** Integrated Pest Management (IPM) practices can help reduce the use of neonicotinoids in the EU. According to IPM principles, farmers shall consider all other available preventive and non-chemical pest control alternatives before using chemical PPPs. IPM is compulsory since 2009<sup>44</sup>, but the ECA special report on the sustainable

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<sup>43</sup> Commission Implementing Decision (EU) 2020/152 and Commission Implementing Decision (EU) 2020/153 of 3 February 2020.

<sup>44</sup> Directive 128/2009/EC of the European Parliament and of the Council of 21 October 2009 on the sustainable use of pesticides.

use of PPPs showed that the EU had made little progress in promoting its use (see *Box 7*).

### Box 7

#### Special report 05/2020 - Sustainable use of plant protection products: limited progress in measuring and reducing risks

EU rules require farmers to apply IPM. When applying IPM, farmers should solely use chemical PPPs if necessary after exhausting preventive, physical, biological or other non-chemical methods of pest control.

The audit concluded that the enforcement of IPM in the EU had thus far been weak, and that the Commission and Member States could have done more to reduce the risks of using PPPs. The Commission did not check the completeness and correctness of the Member States' transposition of the Directive on sustainable use of pesticides into national legislation. In the absence of clear criteria as to how users should apply the general principles of IPM or how the authorities should assess compliance, few Member States check the application of IPM principles.

Member States gather statistics on the agricultural uses of PPPs for selected crops every five years, and transmit the data for each active substance to Eurostat. Due to strict confidentiality rules applied to PPPs, Eurostat cannot publish the data available for individual active substances or even share it with other Commission directorates.

**64** Following the restrictions on the use of imidacloprid, thiamethoxam and clothianidin, farmers increased their uses of thiacloprid<sup>45</sup>. In January 2020, the Commission adopted an implementing regulation not to renew the approval to use thiacloprid in the EU due to concerns related to its impact on groundwater and on human health. EFSA concluded in its report on thiacloprid that the assessment of the risks to bees could not be conclusively finalised based on the information provided by the applicant<sup>46</sup>.

<sup>45</sup> Kathage J. et al, "The impact of restrictions on neonicotinoid and fipronil insecticides on pest management in maize, oilseed rape and sunflower in eight European Union regions", 13 October 2017.

<sup>46</sup> Commission Implementing Regulation (EU) 2020/23 of 13 January 2020 concerning the non-renewal of the approval of the active substance thiacloprid in accordance with Regulation (EC) No 1107/2009 and amending the Annex to Commission Implementing Regulation (EU) No 540/2011.

# Conclusions and recommendations

**65** We examined whether the Commission has taken a consistent approach to the protection of wild pollinators in the EU. Overall, we found that this was not the case. We identified gaps in the key EU policies addressing the main threats to wild pollinators, and found that the Pollinators Initiative does not provide the tools and mechanisms to address them.

**66** The Pollinators Initiative is a step towards protecting wild pollinators in the EU, but lacks governance and control mechanisms to address the main threats identified (paragraphs 18-22). The EU biodiversity strategy to 2030 does not include any specific actions to address the decline of wild pollinators. To give practical shape to the new strategy to 2030, the Commission plans to issue follow-up actions and measures in 2021 (paragraphs 14-17).

## Recommendation 1 – Assess the need for specific measures for wild pollinators

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The Commission should:

- (a) assess whether actions should be added to address threats currently not considered in the Pollinators Initiative in the follow-up actions and measures for the EU biodiversity strategy to 2030;
- (b) set up appropriate governance and monitoring mechanisms for these actions and measures, including assigning clear responsibilities between Commission departments involved in policy areas relevant for wild pollinators.

**Timeframe: 2023**

**67** The Habitats Directive aims to protect and restore species listed in its annexes. However, the Directive covers a limited number of wild pollinators, and does not protect bee or hoverfly species. The strategic management plans for Natura 2000 sites have no specific requirements for pollinators. The LIFE programme can finance conservation projects focusing on species listed as endangered or worse in European red lists, but not covered by the Habitats Directive. The Commission has not registered such projects by the time of the audit (paragraphs 24-31).

**68** The current CAP does not include any specific measures to protect wild pollinators. The CAP proposals for 2021-2027 give Member States more flexibility in the implementation of beneficial measures for the environment, and require the Commission to assess the environmental ambitions of Member States when approving their CAP strategic plans (paragraphs 32-40).

## Recommendation 2 – Better integrate actions to protect wild pollinators in EU policy instruments addressing biodiversity conservation and agriculture

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The Commission should:

- (a) verify that the strategic planning tools for the management of Natura 2000 sites (PAFs) include requirements for the protection of wild pollinators, and assess the relevant measures proposed by the Member States in the PAFs;
- (b) assess which management practices in measures included in the 2014-2020 CAP had positive and negative effects on wild pollinators;
- (c) when checking CAP Strategic Plans, verify that Member States include, whenever necessary, management practices which have a significant and positive effect on wild pollinators in conditionality, eco-schemes and rural development agri-environment-climate measures.

**Timeframe: 2023**

**69** Since 2009, the PPPs legislation includes additional safeguards to protect honey bees. The risk assessment scheme currently used to approve active substances in the EU is based on guidance from 2002 and does not address safeguards included in more recent PPP legislation, nor later scientific knowledge. In the past seven years, the Commission did not succeed in getting the necessary support from Member States for updating the guidance document. The EU framework allowed Member States to continue granting emergency authorisations for banned PPPs which are harmful to pollinators (paragraphs 42-64).



### Recommendation 3 – Improve the protection of wild pollinators in the pesticides risk assessment process

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The Commission should:

- (a) propose to amend or create implementing regulations for PPPs to:
  - (i) include safeguards for a representative range of wild pollinator species which are comparable to those for honey bees, and
  - (ii) require that Member States duly justify emergency authorisations granted, including specific information on activities conducted to find alternative solutions and their results.
- (b) prepare, together with Member States, a work plan for the development of test methods focusing on wild pollinators, and the definition of specific protection goals for wild pollinators.

**Timeframe: 2022**

This Report was adopted by Chamber I, headed by Mr Samo Jereb, Member of the Court of Auditors, in Luxembourg at its meeting of 17 June 2020.

*For the Court of Auditors*

Klaus-Heiner Lehne  
*President*

# Annex

## Annex I — Toxicity tests for pollinators requested by guidance documents

The two tables below present the test requirements included in the EU guidance documents setting out how applicants should demonstrate the effects of active substances and PPPs on pollinators. The first table focuses on the current testing requirements, in line with the 2002 guidance document for honey bees. The second table focuses on the testing requirements recommended by EFSA in the 2013 guidance document for bees (honey bees, bumble bees and solitary bees), which was never approved.

### 2002 Guidance Document – test requirements and available internationally agreed test methods

2002 Guidance Document			
Tests required	Honey bees	Bumble bees	Solitary bees
Acute oral toxicity	<ul style="list-style-type: none"> <li>○ Required depending on exposure route.</li> <li>○ Validated test methods available:               <ul style="list-style-type: none"> <li>— OECD Test No. 213 (1998)</li> <li>— EPPO 170</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>○ Not required</li> </ul>	<ul style="list-style-type: none"> <li>○ Not required</li> </ul>
Acute contact toxicity	<ul style="list-style-type: none"> <li>○ Required depending on exposure route.</li> <li>○ Validated test methods available:               <ul style="list-style-type: none"> <li>— OECD 214 (1998)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>○ Not required</li> </ul>	<ul style="list-style-type: none"> <li>○ Not required</li> </ul>
Bee brood feeding test	<ul style="list-style-type: none"> <li>○ Required for insect growth regulators.</li> <li>○ Test method recommended:               <ul style="list-style-type: none"> <li>— Omen et al. (1992)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>○ Not required</li> </ul>	<ul style="list-style-type: none"> <li>○ Not required</li> </ul>
Higher tier testing	<ul style="list-style-type: none"> <li>○ Required depending on results of standard laboratory tests.</li> <li>○ Validated test method available:               <ul style="list-style-type: none"> <li>— EPPO 170</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>○ Not required</li> </ul>	<ul style="list-style-type: none"> <li>○ Not required</li> </ul>

## 2013 EFSA Guidance Document – test requirements and available internationally agreed test methods

EFSA 2013 Guidance Document			
Tests required	Honey bees	Bumble bees	Solitary bees
Acute oral toxicity	<ul style="list-style-type: none"> <li>○ Always required (spray and solid).</li> <li>○ Validated test methods available: <ul style="list-style-type: none"> <li>— OECD Test No. 213 (1998)</li> <li>— EPPO 170</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>○ Required. No validated test method available, but test procedure described.</li> <li>○ The guidance did not consider fully suitable the application of OECD 213 and EPPO 170.</li> </ul> <p>Developed since:</p> <ul style="list-style-type: none"> <li>○ OECD 247 (2017)</li> </ul>	<ul style="list-style-type: none"> <li>○ Required. No validated test method available.</li> <li>○ The guidance described a test procedure. It did not consider fully suitable the application of OECD 213 and EPPO 170.</li> </ul> <p>Developed since:</p> <ul style="list-style-type: none"> <li>○ ICPPR ring test</li> </ul>
Acute contact toxicity	<ul style="list-style-type: none"> <li>○ Required, if likely (spray and solid applications).</li> <li>○ Validated test method available: <ul style="list-style-type: none"> <li>— OECD Test No. 214 (1998)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>○ Required. No validated test method available.</li> <li>○ The guidance considered suitable the application of OECD 214, and recommended the same test procedure as for oral toxicity.</li> </ul> <p>Developed since:</p> <ul style="list-style-type: none"> <li>○ OECD 246 (2017)</li> </ul>	<ul style="list-style-type: none"> <li>○ Required. No validated test method available.</li> <li>○ The guidance considered suitable the application of OECD 214, and recommended the same test procedure as for oral toxicity.</li> </ul> <p>Developed since:</p> <ul style="list-style-type: none"> <li>○ ICPPR ring test</li> </ul> <p>Work in progress:</p> <ul style="list-style-type: none"> <li>○ OECD Project 2.65: New test guidelines on acute contact toxicity test for the solitary living Mason Bee (<i>Osmia</i> spp.) – approval expected Q2/2021. (project led by Switzerland)</li> </ul>
Chronic toxicity	<ul style="list-style-type: none"> <li>○ Required. No validated test method available.</li> <li>○ The guidance proposed chronic oral toxicity tests to be conducted based on information from Decourtye et al. (2005), (Suchail et al., 2001), Thompson H. (Food and Environment Research Agency, personal communication, 2012) and CEB, (2012).</li> </ul> <p>Developed since:</p> <ul style="list-style-type: none"> <li>○ OECD Test No. 245 (2017)</li> </ul>	<ul style="list-style-type: none"> <li>○ Required. No validated test method available.</li> <li>○ The guidance recommended using the endpoints obtained in the tests carried out with honey bees until an internationally agreed and adopted guideline is available for these tests.</li> </ul>	<ul style="list-style-type: none"> <li>○ Required. No validated test method available.</li> <li>○ The guidance recommended using the endpoints obtained in the tests carried out with honey bees until an internationally agreed and adopted guideline is available for these tests.</li> </ul>

EFSA 2013 Guidance Document			
Tests required	Honey bees	Bumble bees	Solitary bees
Effects on bee development and other bee life stages (Toxicity to larvae)	<ul style="list-style-type: none"> <li>Required. No validated test method available.</li> <li>The guidance recommended carrying out a chronic larval toxicity study based on the draft OECD guidelines for larval toxicity testing (OECD Test No. 237).</li> </ul> <p>Developed since:</p> <ul style="list-style-type: none"> <li>OECD Test No. 237 (2013);</li> <li>OECD Guidance document 239 (2016)</li> </ul>	<ul style="list-style-type: none"> <li>Required. No validated test method available.</li> <li>The guidance recommended using the endpoints obtained in the tests carried out with honey bees until an internationally agreed and adopted guideline is available for these tests.</li> <li>According to a European Parliament study published in 2018<sup>47</sup>, there are issues around the technical feasibility of such test methods.</li> </ul>	<ul style="list-style-type: none"> <li>Required. No validated test method available.</li> <li>The guidance recommended using the endpoints obtained in the tests carried out with honey bees until an internationally agreed and adopted guideline is available for these tests. It also considered important to carry out oral toxicity tests on larvae for solitary bees in the case of second tier tests, and proposed a test procedure.</li> <li>According to a European Parliament study published in 2018, there are issues around the technical feasibility of such test methods.</li> </ul>
Sub-lethal effects	<ul style="list-style-type: none"> <li>Required, specifically the test of development of hypo pharyngeal glands. No validated test method available.</li> <li>The guidance mentioned that “currently it was not possible to consider sub-lethal effects in the risk assessment schemes”, and did not recommend the homing study included in the draft version. The guidance recommended focusing the risk assessment on acute and chronic effects on adults and larvae.</li> </ul> <p>Work in progress:</p> <ul style="list-style-type: none"> <li>OECD Project 2.60: Test Guideline: Homing flight test on honeybee (<i>Apis mellifera</i> L.) after single exposure to sub-lethal doses. First draft of the test guidelines expected in Q4/2019 (project led by France).</li> </ul>	<ul style="list-style-type: none"> <li>Required. No validated test method available.</li> <li>The guidance did not address the testing of sub-lethal effects in Annex P “Test protocols for bumble bees”.</li> </ul>	<ul style="list-style-type: none"> <li>Required. No validated test method available.</li> <li>The guidance did not address the testing of sub-lethal effects in Annex Q “Test protocols for solitary bees (<i>Osmia cornuta</i> and <i>Osmia Bicornis</i> = <i>O. Rufa</i>)”.</li> </ul>

<sup>47</sup> European Parliament, “Guidelines for submission and evaluation of applications for the approval of active substances in pesticides”, Study, September 2018.

EFSA 2013 Guidance Document			
Tests required	Honey bees	Bumble bees	Solitary bees
Higher tier (cage, tunnel, field)	<ul style="list-style-type: none"> <li>○ Conditionally required. No validated test method available for adult honey bees. Methods available for larvae.</li> <li>○ For semi-field and field tests, the guidance recommended some ways of conducting these tests until internationally agreed and adopted guidelines are available. In case of concern regarding potential effects on larvae, the guidance suggested using two existing methods: <ul style="list-style-type: none"> <li>— OECD 75 (2007)</li> <li>— The Omen test method (1992)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>○ Conditionally required. No validated test method available.</li> <li>○ The guidance stated that the OECD semi-field honey bee methodology under insect-proof tunnels could be easily adapted to bumble bees. As for field studies, “as long as this new method is not available and validated the combined field to laboratory studies should be used.” For the combined field-to-laboratory studies, the guidance recommended using the protocols proposed by Whitehorn et al. (2012) and Gill et al. (2012).</li> </ul>	<ul style="list-style-type: none"> <li>○ Conditionally required. No validated test method available.</li> <li>○ For semi-field tests, the guidance mentioned some published test methods, and described a test procedure. For field tests, the guidance mentioned that they can be suitable to study sub-lethal effects. As there is no protocol available for <i>Osmia</i>, a protocol adapted from a 1983 study on <i>Megachile rotundata</i> was proposed.</li> </ul>

Source: ECA based on EFSA 2013 guidance document, and OECD and European Parliament information.

# Acronyms and abbreviations

**AECM:** Agri-environment-climate measures

**CAP:** Common agricultural policy

**EEA:** European Environment Agency

**EFAs:** Ecological Focus Areas

**EFSA:** European Food Safety Authority

**EIP:** European Innovation Partnership

**EU:** European Union

**FP7:** Seventh Framework Programme for Research and Innovation

**GAECs:** Good Agricultural and Environmental Conditions

**IPBES:** Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

**IPM:** Integrated Pest Management

**IUCN:** International Union for Conservation of Nature

**PAFs:** Prioritised Action Frameworks

**ScoPAFF:** Standing Committee on Plants, Animals, Food and Feed

**SMRs:** Statutory Management Requirements

# Glossary

**Active substances:** The active component against pests or plant diseases in a plant protection product.

**Background mortality:** Normal rate of death irrespective of the cause.

**Biodiversity:** The variability among living organisms from all sources, including inter alia terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part, this includes diversity within species, between species, and of ecosystems.

**Buffer strips:** In agriculture, area of land maintained in permanent vegetation that helps to control environmental problems such as soil, and water quality.

**Catch crops:** In agriculture, fast-growing crops grown between successive plantings of a main crop.

**Chemicals:** In the report, chemical plant protection products, often based on man-made substances, designed to reduce the vitality of pest populations while leaving plants unharmed.

**Crop pollination:** Pollination of cultivated plants.

**Ecosystem:** Dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.

**Ecosystem services:** Direct and indirect contributions of ecosystems to the human survival and quality of life.

**European Red List:** Review of the status of European species to identify those species that are threatened with extinction at the European level (Pan-Europe and the European Union), performed according to regional Red Listing guidelines established by the International Union for Conservation of Nature.

**Eurostat:** Statistical office of the European Union.

**Fallow land:** Arable land set at rest for a period of at least one year.

**Fertilisers:** Any solid, liquid or gaseous substances (synthetic or organic) containing one or more plant nutrients applied to the soil to maintain or improve soil fertility.

**Guttation:** Exudation of liquid water from the uninjured surface of a plant leaf.

**Habitat:** Physical location or type of environment in which an organism or biological population lives or occurs, defined by the sum of the abiotic and biotic factors of the environment, whether natural or modified, which are essential to the life and reproduction of the species.

**Light pollution:** Artificial light at night affecting the natural day-night/light-dark cycle under which all species and ecosystems on Earth have evolved.

**Management practices:** Set of agricultural practices used to improve the growth, development, and yield of agricultural crops. These include: water management, tillage and land preparation, liming and acidity control, fertiliser use and crop protection.

**Melliferous plant:** Plant producing substances that can be collected by insects and turned into honey.

**Natura 2000:** Network of breeding and resting sites for rare and threatened species, and some rare natural habitat types protected under the Birds Directive and the Habitats Directive.

**Natural capital:** Stocks of natural assets including geology, soil, air, water and all living things.

**Nectar:** Sweet liquid produced by flowers and collected by bees and other insects.

**Nitrogen-fixing crops:** Crops that contribute to nitrogen fixation, a process by which molecular nitrogen in the air is converted into ammonia or related nitrogenous compounds in soil.

**Pesticides:** Plant protection products.

**Plant protection products (PPP):** Products, consisting of or containing active substances, and intended for protecting plants or plant products against harmful organisms or preventing the action of such organisms, influencing the life processes of plants, preserving plant products, destroying undesired plants or parts of plants or checking or preventing undesired growth of plants.

**Pollen:** Powder produced by the male part of a flower causing the female part of the same type of flower to produce seeds.

**Representative range of species:** Subset of species accurately reflecting the majority of characteristics presented by a larger group.



**Residue:** One or more substances present in or on plants or plant products, edible animal products, drinking water or elsewhere in the environment and resulting from the use of a plant protection product, including their metabolites, breakdown or reaction products.

**Route of exposure:** Ways through which living organisms can come into contact with a hazardous substance.

**Sub-lethal toxicity:** Capacity or property of a substance to cause biological, physiological, demographic or behavioural effects on living organisms that survive exposure to a toxicant.

**Systemic pesticides:** Water-soluble pesticides that are absorbed and distributed systemically throughout the whole plant when applied to its roots, seeds, or leaves.

**Thrip:** Small black winged insect that feeds mostly on plants by puncturing and sucking up the content.

**Toxicity:** The capacity or property of a substance to cause adverse effects.

**REPLIES OF THE EUROPEAN COMMISSION TO THE EUROPEAN COURT OF  
AUDITORS SPECIAL REPORT:**

**“PROTECTION OF WILD POLLINATORS IN THE EU - COMMISSION INITIATIVES  
HAVE NOT BORNE FRUIT”**

**EXECUTIVE SUMMARY**

I. The Commission considers that the main drivers of wild pollinators decline are multiple and include land use change, intensive agricultural management including pesticide use, climate change, environmental pollution and invasive alien species.

II. The Commission notes that the overall framework has been put in place by the European Parliament and the Council, when adopting Regulations or Directives and conferring certain implementing powers on the Commission. The Commission can only act within this framework.

There are many actions other than updates of legislation that can be implemented. The implementation of some actions/activities take much longer than the period 2021-2022 chosen by the European Court of Auditors, ECA.

VI. The Commission accepts six of the recommendations made in this report and partially accepts the other recommendation.

**INTRODUCTION**

05. The PoshBee project (Pan-european assessment, monitoring, and mitigation of Stressors on the Health of Bees) selected under the Societal Challenge 2 of H2020, call 2016 aims to provide the first comprehensive pan-European assessment of the exposure hazard of chemicals, their mixtures, and co-occurrence with pathogens and nutritional stress for solitary, bumble, and honey bees across two major cropping systems (<https://cordis.europa.eu/project/id/773921> ). The project is carried out in collaboration with the European Food Safety Authority, EFSA.

A number of Operational Group projects of the EIP-AGRI, the agricultural European Innovation Partnership, (<https://ec.europa.eu/eip/agriculture/>) deal with pollinators and more specifically honeybee production and bee health.

Wild pollinators are implicitly covered under the provisions related to ‘non-target arthropods’ in the Plant Protection Products Regulation.

08. As part of the zero-pollution ambition, and the Farm to Fork and Biodiversity strategies, the Commission is aiming to reduce dependency on pesticides and stimulating the take-up of low-risk and non-chemical alternatives. In addition, the EU is also supporting research into new plant protection solutions and increased use of indicators to measure the change over time in risk from pesticides in Europe.

The Harmonised Risk Indicator 1, calculated by multiplying the quantities of active substances placed on the market in plant protection products by a weighting factor, shows a 20% reduction in the risk to human health and the environment from pesticides in the European Union in the period from 2011 to 2017.

**OBSERVATIONS**

17. The European Grassland Butterfly Index presents representativeness limitations. Currently the grassland butterfly index is based on monitoring in 14 Countries, with 75% of the monitoring sites only in 3 countries including the United Kingdom, the Netherlands and Germany. Even excluding the United Kingdom, EU Western countries account for 74% of transects. Northern (14%), Southern (11%) and Eastern Europe (1%) are underrepresented<sup>1</sup>.

The Commission has launched a pilot project (Assessing Butterflies in Europe – ABLE, <https://butterfly-monitoring.net/able>) to increase the number of monitored countries.

### **Box 2 - The Pollinators Initiative did not always lead to changes in key policies and measures**

Action 4C: the Prioritised Action Framework, PAF, template was developed in 2017, and could not include a request to specify measures for pollinators, because the identification of Action 4C took place later in the second quarter of 2018. Nevertheless, after the adoption of the Pollinators initiative, the Commission encouraged Member States to provide measures for pollinators in the section of the PAF template on socioeconomic benefits of the PAFs measures.

Action 5C:

Three of the nine CAP specific objectives are concerning climate and environment including the specific objective (f) to “contribute to the protection of biodiversity, enhance ecosystems services and preserve habitats and landscapes”.

This objective includes the protection of pollinators and pollination services.

In the 2022-2027 period, Member States will benefit from more subsidiarity and flexibility to design, implement and support measures that best suit their needs under the CAP strategic plans. It is an opportunity for Member States and stakeholders to design and deploy tailored measures for pollinators, including through collective and results-based schemes. Furthermore, the Commission proposal for the CAP post 2020 explicitly requires Member States to take into account national environmental plans, and their targets, emanating from Union legislation.

22. The Commission put in place all necessary internal arrangements for the implementation of the initiative. The roles and responsibilities were clearly set and no internal governance issues were encountered. The Commission regularly updates Member States and stakeholders on the progress of the initiative in the context of the Coordination Group for Nature and Biodiversity, the governance framework for the implementation of the EU biodiversity strategy to 2020. Lack of robust data on pollinators and their pressures prevent setting up concrete targets to achieve under different actions. The very first action of the initiative aims to address this deficiency.

25. Most known pollinators species (including many of the most endangered pollinator species) are linked to habitats types listed in the habitats directive and as such, they are benefiting for the protection, management and restoration measures taken under the Directive.

26. The study “The impact of Natura 2000 on non-target species, assessment using volunteer-based biodiversity monitoring” demonstrated that the efforts taken by Member States during the 2007-2013 period were insufficient to stem the overall decline of butterfly species in Natura 2000 areas.

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<sup>1</sup> In Southern countries, only Spain is partially represented; Portugal, Italy, Greece, Malta and Cyprus are not. In the Eastern countries the representation is marginal, with 12 and 8 transects in Romania and Slovenia, respectively; all other Eastern countries are not sampled. In Northern countries Denmark and Estonia are not represented, and most transects are in Sweden. (See van Sway et al 2017).

29. The PAF template does not include specific requirements for pollinators because it was already drafted under several rounds of consultations in 2017, before the drafting of action 4C in the pollinators initiative. Nevertheless, certain national PAF include specific measures for pollinators. For example, the Dutch PAF foresees a budget of 500.000 €/year for the implementation of its national strategy on pollinators.

When providing feedback to national draft PAFs, the Commission actively encourages Member States to include in their PAFs any strategies or measures that specifically target pollinators.

32. While the Commission considers that agriculture intensification plays a major role in the decline of pollinators, it would like to highlight that agricultural land abandonment can also exert pressure on pollinators, in areas with extensive farming practices which maintain important semi-natural habitats for wild pollinators.

The CAP framework 2014-2020 includes priorities which directly refer to the restoration, preservation and enhancement of ecosystems and biodiversity. This provides the basis for actions aimed at creating pollinators-beneficial conditions.

The Commission Proposal for the CAP post 2020 strengthens the priority of biodiversity and enhances the policy ambition by setting result and impact indicators addressing the policy's impact on biodiversity, habitats, ecosystems and landscape –elements relevant for pollinators.

See also reply to Box 2.

33. Common Commission reply to paragraphs 33 and Box 4

When a farmer is found not to comply with EU legislative rules including environmental rules, CAP payments received may, under the cross-compliance system, be reduced in proportion of the severity of the infringement. This reduction may range from 1% to 100%. In practice, most infringements are non-intentional and not severe and cross-compliance sanctions applied are therefore in the range of 1% to 5%.

A number of rules are set in EU Directives and Regulations (Statutory Management Requirements-SMRs) and cross-compliance helps raising farmers' awareness to respect provisions of these EU legislations. Other rules are set in the CAP (Good Agricultural and Environmental Conditions-GAEC standards) and Member States must define national standards adapted to local conditions and needs. When, at the light of experience, Member States conclude that biodiversity benefits, including for pollinators, are not met, they have a wide flexibility to adjust the rules applied to farmers as SMRs or GAEC standards.

Cross-compliance is not the only driver for the state of biodiversity and the effect of cross-compliance cannot be specifically measured by results or impact indicators, which reflect multi-factorial trends. It is why the Commission relies on output indicators, not impact indicators, to measure the implementation of single instruments like cross-compliance.

The Commission therefore considers that cross-compliance, associated with other CAP instruments, has a beneficial impact on farmland biodiversity.

34. Common reply to paragraphs 34, Box 5, 35, 36 and 37

Greening is a support scheme under direct payments aiming at remunerating farmers for the public goods provided by three measures: the protection of permanent grassland, including the most environmentally sensitive, crop diversification and maintain a percentage of arable land as Ecological Focus Area (EFA). The Commission assessment of the implementation of greening made in 2016 concluded that this instrument has a significant potential, in particular because of its wide area coverage (77% of the total agricultural area), but this potential was not fully exploited by Member states and farmers. This is why the Commission has introduced a number of improvements following

this assessment, in particular by prohibiting the use of pesticides on EFA as from 2018. This prohibition explicitly mentions productive agricultural area since the risk of using pesticides on non-productive is very limited.

When, at the light of experience, Member States conclude that biodiversity benefits are not met, including for pollinators, they have a wide flexibility to adjust the rules applied to farmers under greening.

Greening is not the only driver for the state of biodiversity and the effect of greening cannot be specifically measured by results or impact indicators, which reflect multi-factorial trends. It is why the Commission relies on output indicators, not impact indicators, to measure the implementation of single instruments like greening.

The Commission therefore considers that the current greening has the potential to benefit biodiversity, including pollinators.

However, this potential was not fully exploited and the proposal for future CAP aims at addressing this shortcoming.

35. The footnote refers to the external evaluation support study. The Commission evaluation is staff working document SWD (2018) 478 final.

The SWD (page 57) and the support study (page 125 and 227) mention:

The analysis shows that for the EU-28, the EFA element with the potential to have the greatest net positive impact is the fallow option, where ‘fallow’ consists of stubble with natural regeneration of weeds or of wildlife seed mixes. Net benefits are also possible from multi-annual nitrogen-fixing forage crops, some landscape features (i.e. field margins, hedges, trees, ponds and ditches), buffer strips and field margins.

Also the external evaluation study report on the impact of the CAP on biodiversity (SWD forthcoming) indicates: “Land lying fallow, which is the most beneficial EFA type for biodiversity...” (page 81).

37. The Commission considers that generally farmers have no incentive to apply pesticides on field margins, buffer strips and other non-product landscape features as there are no crops to protect. Furthermore, Member States can set in their National Action Plans under the Sustainable Use Directive default buffer strips along certain areas (such as watercourses). When considered necessary, they must set specific obligations as regards risk mitigation measures in the authorisations for plant protection products, which farmers must respect (e.g. drift reduction nozzles or non-spray buffer zones within fields). In fact, Member States do often impose such restrictions to protect watercourses and/or off-field areas from drift.

38. Agri-environment-climate Measures, AECM, has been already for years one of the main CAP instruments in encouraging farmers to introduce or continue applying farming practices going beyond mandatory requirements and contributing to the protection and improvement of the environment, landscape, biological diversity and natural resources. In the period 2014-2020, more than 16% of all EU fund for rural development has been allocated by Member States to AECM. This, together with the support for organic farming and Natura 2000, has led to the situation where more than 17% of the EU’s utilised agricultural area, UAA, is under management farming practices expected to benefit biodiversity, including pollinators, and which are supported under these measures. These are environmentally ambitious farming practices set at the level beyond the cross-compliance requirements, hence delivering additional environmental public goods.

39. Common reply to paragraphs 39 and 40:

The proposal for a future CAP strengthens the cross-compliance rules in an enhanced conditionality, among others for biodiversity and pesticides, by introducing new SMRs and GAEC standards, as well as merging greening obligations in a strengthened form. In this respect the new scheme under direct payment set for environmental purpose, the eco-schemes, will contribute to this objective.

With regard to AECM, the Commission Proposal proposes further improvements:

- it promotes with Member States support to collective schemes and result-based payments schemes – two approaches which can bring a significant enhancement in the quality of the environmental public goods at a larger scale and in a measurable manner. Both can be very beneficial for pollinators as they operate on a landscape scale rather than a parcel level.
- it allows, in exceptional and justified cases, to sign AEC commitments for a shorter period than 5 to 7 years if such a shorter period is enough for the environmental benefits to materialise. This offers further flexibility for the AECM potential beneficiaries, increasing AEC attractiveness.
- it increase the contribution rate for AEC commitments and other relevant commitments such as organic farming, Natura 2000 payments, non-productive investments increasing their attractiveness.

The high ambition for pollinators will not be met by instruments alone, but only in association between each other. Advice under the Farm Advisory Services (FAS) will also be an important element to help farmers applying practices beneficial for pollinators among others.

43. Replacing herbicides by mechanical weeding is expected to have the same effect on quantity and diversity of floral resources.

44. The Plant Protection Products, PPP, Regulation covers insect species beyond bees under its provisions related to non-target arthropods, for which there are specific provisions. These provisions implicitly (or indirectly) protect wild pollinators.

46. The Commission would like to point out that it has undertaken considerable efforts to align the risk assessment procedure for honeybees with the legal requirements.

The Commission highlights that the guidance has been adopted in 2002, i.e. prior to the adoption of the Regulation 2009. It can thus not be aligned with that Regulation.

47. The 2002 Guidance Document considers the risk to larvae for insect growth regulators and other active substances which may cause long-term adverse effects on hive health. In such cases, evidence is required confirming a lack of effects on hive health over a long time period. (See end of section 4.3 of the 2002 Guidance Document).

53. The Commission emphasises that the mandate to EFSA was part of a broader solution. In fact, the mandate was based on a request from a vast majority of Member States and for some, it was a requirement for giving their support for changing the uniform principles that would have allowed implementing the parts of the guidance related to acute toxicity for honeybees. This change of the uniform principles was then objected by the European Parliament in October 2019.

The Commission also notes that it did not ask EFSA for an earlier review of the guidance because the 2013 restrictions for the three neonicotinoids, for which Court proceedings were ongoing until 2018, had been enacted on the basis of an EFSA assessment that was also underpinning the 2013 guidance document. Furthermore, the Commission considered at that time that the 2013 guidance represented the latest (most up to date) scientific advice on the subject from EFSA available.

54. The Commission has not yet required applicants to use test methods developed after 2013 as the Guidance document has not yet been endorsed by the Member States.

55. As regards the revision of the specific protection goal for bees, a first discussion with Member States was held on 6 March 2020.

The review of the specific protection goals set in the 2013 EFSA Guidance Document is scheduled to be finalised in May 2020. This review will discuss specific protection goals for honeybees, bumblebees and solitary bees.

56. The POSHBEE project selected under the Societal Challenge 2 of H2020, call 2016 aims to provide the first comprehensive pan-European assessment of the exposure hazard of chemicals, their mixtures, and co-occurrence with pathogens and nutritional stress for solitary, bumble, and honey bees across two major cropping systems (<https://cordis.europa.eu/project/id/773921>). The project is carried out in collaboration with EFSA.

The Commission also supports under Horizon 2020 research activities that will test and deliver integrated approaches to advance in the assessment of the impacts of plant protection products and their metabolites (PPPs) on plant, human, animal and ecosystem health with a dedicated research project in the Societal Challenge 2 work programme 2018-2020 (see SFS-04-2019-2020).

The Commission notes that the current data requirements for plant protection products (Regulation 284/2013) include also acute toxicity test with bees. Plant protection products containing more than one active substance are therefore already assessed at Member State level for the national authorisations.

58. The Commission also restricted the use of fipronil in 2013 to protect bees.

Furthermore, following the restrictions in April 2018, the applicants withdrew the applications for renewal of approval for clothianidin and thiametoxam and no application will be submitted for imidacloprid. In January 2020, the Commission did not renew the approval of thiacloprid.

62. There is no obligation in the PPP Regulation on the Commission to initiate such research. Nevertheless, several research projects have been completed before 2019 or are ongoing/planned<sup>2</sup>.

#### **Box 7 - Special report 05/2020 - Sustainable use of plant protection products: limited progress in measuring and reducing risks**

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<sup>2</sup> 1) Factsheet on plant health research and innovation (including IPM, alternatives to pesticides and emerging pests/diseases) [https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/factsheet-agri-plant-health\\_en.pdf](https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/factsheet-agri-plant-health_en.pdf)

For example: EUCLID aimed at developing more sustainable pest management methods in order to reduce the effects from pesticides. This project ran from September 2015 until September 2019.

2) A publication of 10 research projects and their results related to IPM/pesticides/pests&diseases across all parts of Horizon 2020 (Marie Curie, ERC, ...) <https://op.europa.eu/en/publication-detail/-/publication/cc7026c4-56b6-11ea-accc-01aa75ed71a1/language-en/format-PDF/source-117749527>

For example: nEUROSTRESSPEP aimed to identify 'greener' insecticides by turning the insects' own hormones against them. This project ran from June 2015 until May 2019

3) Factsheet on ecological approaches and organic farming research & innovation (including agroecology, organic farming, biodiversity, ecosystem Services, agroforestry, pollination, biocontrol, diversification) [https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/factsheet-agri-research-ecological-approaches\\_en.pdf](https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/factsheet-agri-research-ecological-approaches_en.pdf)

For example: ECOSTACK is running since September 2018. The project is working, among others, to quantify the effects of natural enemies and pollinators on crop yields for several crops and pedo-climatic conditions, investigate potential trade-offs between biocontrol and pollination service providers, develop "bio-inspired" plant protection strategies, and assess the in-field status of Ecosystem Service Providers sensitivity to agrochemicals and compatibility for integrated pest management.

Member State authorities shall ensure that professional users comply with the requirement to apply IPM principles. In order to decide on compliance or non-compliance, Member State authorities should have clear assessment criteria.

In line with subsidiarity principle, converting general principles of IPM into practical criteria is the responsibility of Member States, and the Commission will continue to support Member States in this regard.

## **CONCLUSIONS AND RECOMMENDATIONS**

65. The regulatory framework is established by the European Parliament and the Council, which sets the boundaries within which the Commission can act.

### **Recommendation 1 – Assess the need for specific measures for wild pollinators**

a) The Commission accepts the recommendation.

The Commission will undertake a review of the EU Pollinators Initiative by the end of 2020, and based on that consider any follow-up actions on pollinators in 2021.

b) The Commission accepts the recommendation

The governance and monitoring mechanisms for actions on pollinators will be addressed within the framework of the EU Biodiversity Strategy for 2030.

68. The CAP framework 2014-2020 includes priorities which directly refer to the restoration, preservation and enhancement of ecosystems and biodiversity. This provides the basis for actions aimed at creating pollinators-beneficial conditions. The CAP Proposals for post 2020 also includes specific objective on the protection of biodiversity, ecosystem services, habitats and landscapes providing Member States with a large scope for designing actions benefiting pollinators. Member States will have to demonstrate that their Plans provides an increased environmental ambition.

### **Recommendation 2 – Better integrate actions to protect wild pollinators in EU policy instruments addressing biodiversity conservation and agriculture**

a) The Commission accepts the recommendation

b) The Commission partially accepts the recommendation.

The study report on the evaluation of the impact of the CAP on biodiversity provides analysis of the effectiveness, potential but also constraints of the current CAP instruments and measures on general biodiversity with some references to pollinators (ESQ 6 p 103). As such, this analysis also serves the purpose of assessing the measures' impact on pollinators, as pollinators are an integral part of biodiversity. This evaluation will be complemented by the study report related to Action 5A of the EU Pollinators Initiative. The Commission will make use of this and continue to work on identifying best practices beneficial for wild pollinators.

c) The Commission accepts the recommendation.

While the CAP Strategic Plans will have to demonstrate their contribution to CAP general and specific objectives, including the one on the protection of biodiversity, ecosystem services, habitats and landscapes, in the CAP post 2020, Member States will have more flexibility in setting the interventions. Therefore, the choice and design of interventions and management practices proposed by Member States will be based not on pre-established practices but on the analysis of their environmental situations leading to the identification of the needs, including pollinators if relevant for a given territory, to be addressed by the CAP Strategic Plans. These Plans will also have to demonstrate their contribution to the targets and objectives set in the relevant environmental



legislation. The objectives set in the strategies under Green Deal and relevant for the CAP will also have to be taken into account.

In its assessment of the CAP Plans, the Commission will assess that the proposed interventions and management practices in association between each other and not in isolation ensure their potential and efficiency in contributing to the CAP specific objectives, to Member States specific needs identified in the Plan, and in achieving the set targets and objectives.

69. Following significant efforts, the Commission managed to get sufficient support from Member States in July 2019 to amend the uniform principles, which would have allowed implementing the parts of the 2013 EFSA Bee Guidance Document related to acute toxicity for honeybees. This proposal was objected by the European Parliament in October 2019.

**Recommendation 3 – Improve the protection of wild pollinators in the pesticides risk assessment process**

- a) The Commission accepts the recommendation.
- b) The Commission accepts the recommendation.

# Audit team

The ECA's special reports set out the results of its audits of EU policies and programmes, or of management-related topics from specific budgetary areas. The ECA selects and designs these audit tasks to be of maximum impact by considering the risks to performance or compliance, the level of income or spending involved, forthcoming developments and political and public interest.

This performance audit was carried out by Audit Chamber I Sustainable use of natural resources, headed by ECA Member Samo Jereb. The audit was also led by him, supported by Jerneja Vrabič, Private Office Attaché; Robert Markus, Principal Manager; Mihaela Văcărașu, Head of Task; Greta Kapustaitė, Anna Sfiligoi and Radostina Simeonova, Auditors. Richard Moore and Fiona Urquhart provided linguistic support.



*From left to right: Anna Sfiligoi, Samo Jereb, Mihaela Văcărașu, Greta Kapustaitė and Jerneja Vrabič.*

# Timeline

Event	Date
Adoption of Audit Planning Memorandum (APM) / Start of audit	18.9.2019
Official sending of draft report to Commission (or other auditee)	14.4.2020
Adoption of the final report after the adversarial procedure	17.6.2020
Commission's (or other auditee's) official replies received in all languages	1.7.2020

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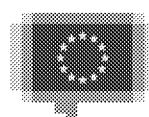
PDF	ISBN 978-92-847-4873-0	ISSN: 1977-5679	DOI: 10.2865/962753	QJ-AB-20-014-EN-N
HTML	ISBN 978-92-847-4834-1	ISSN: 1977-5679	DOI: 10.2865/566822	QJ-AB-20-014-EN-Q

In recent decades, wild pollinators in the EU have declined in abundance and diversity. In 2018, the Commission has made a move towards coordinating its approach to halting the decline of wild pollinators by launching the Pollinators Initiative. We found that this had little effect on halting the decline and that the initiative needed better management to achieve its objectives. In addition, the biodiversity and agricultural policies, and the pesticides legislation did not offer adequate measures for the protection of wild pollinators. We make recommendations to improve the protection of wild pollinators in the existing EU policies and legislation.

ECA special report pursuant to Article 287(4), second subparagraph, TFEU.



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